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Stockpile and Post-Remedial  
Excavation Confirmation Report  
Parcel A, Report No. 4

Boeing Realty Corporation C-6 Facility  
Los Angeles, California

March 1998

**STOCKPILE AND POST-REMEDIAL  
EXCAVATION CONFIRMATION REPORT  
PARCEL A  
REPORT NO. 4**

**BOEING REALTY CORPORATION C-6 FACILITY  
LOS ANGELES, CALIFORNIA**

**March 1998**

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## TABLE OF CONTENTS

<b><u>Section</u></b>		<b><u>Page No.</u></b>
<b>1.0</b>	<b>INTRODUCTION</b>	1-1
	1.1 Overview	1-1
	1.2 Purpose and Objective	1-1
<b>2.0</b>	<b>OPEN AREA NO. 1 REMEDIAL EXCAVATIONS</b>	2-1
	2.1 Soil Sampling	2-2
	2.1.1 Hot Spot Sampling	2-2
	2.1.2 Stockpile Sampling	2-3
	2.1.3 Confirmation Sampling	2-3
	2.2 Soil Excavation	2-5
	2.3 Stockpile Soil Quality	2-5
	2.3.1 OA1-RE-1 Stockpiles A through J	2-5
	2.3.2 OA1-RE-2 Stockpiles A1/A2 through J	2-6
	2.3.3 OA1-RE-3 Stockpiles A through J	2-6
	2.4 Confirmation Sampling	2-7
	2.4.1 OA1-RE-1 Remedial Excavation	2-7
	2.4.2 OA1-RE-2 Remedial Excavation	2-7
	2.4.3 OA1-RE-3 Remedial Excavation	2-7
<b>3.0</b>	<b>DATA SUMMARIES AND CONCLUSIONS</b>	3-1
	3.1 Soil Screening Criteria	3-1
	3.1.1 Drinking Water	3-1
	3.1.2 Human Health	3-2
	3.1.3 Evaluation Process	3-3
	3.2 Stockpile Evaluations	3-4
	3.2.1 OA1-RE-1 Stockpiles A through J	3-4
	3.2.2 OA1-RE-2 Stockpiles A through J	3-5
	3.2.3 OA1-RE-3 Stockpiles A through J	3-7
	3.3 In-Situ Soil Quality	3-8
	3.3.1 OA1-RE-1 Remedial Excavation	3-8
	3.3.2 OA1-RE-2 Remedial Excavation	3-8
	3.3.3 OA1-RE-3 Remedial Excavation	3-9
<b>4.0</b>	<b>REFERENCES</b>	4-1

## TABLE OF CONTENTS

(continued)

### Appendices

- A - Stockpile Laboratory Analytical Reports
  - A-1 OA1-RE-1 Stockpiles
  - A-2 OA1-RE-2 Stockpiles
  - A-3 OA1-RE-3 Stockpiles
- B - Confirmation Sample Laboratory Analytical Reports
  - B-1 OA1-RE-1 Remedial Excavation
  - B-2 OA1-RE-2 Remedial Excavation
  - B-3 OA1-RE-3 Remedial Excavation
- C - Non-Hazardous Waste Disposal Documentation
- D - Non-RCRA Hazardous Waste Disposal Documentation

## LIST OF FIGURES

### Figure No.

- 1 C-6 Facility Map
- 2 Site Map
- 3 Remedial Excavations OA1-RE-1, OA1-RE-2, and OA1-RE-3 Locations
- 4 Remedial Excavation OA1-RE-1 Stockpiles and Sample Locations
- 5 Remedial Excavation OA1-RE-2 Stockpiles A1/A2 and B, Stockpiles and Sample Locations
- 6 Remedial Excavation OA1-RE-2 Stockpiles C through J, Stockpiles and Sample Locations
- 7 Remedial Excavation OA1-RE-3 Stockpiles and Sample Locations
- 8 Excavated Hot Spot and Confirmation Sample Locations
- 9 Remedial Excavation OA1-RE-1 Confirmation Sample Locations
- 10 Remedial Excavation OA1-RE-2 Confirmation Sample Locations
- 11 Remedial Excavation OA1-RE-3 Confirmation Sample Locations
- 12 Soil Screening Evaluation Process — Excavated Soil
- 13 Soil Screening Evaluation Process — Residual Soil
- 14 Soil Backfill Locations

## LIST OF TABLES

### Table No.

1	Summary of Soil Sample Analytical Methods
2	Analytical Data Summary, Remedial Excavation OA1-RE-1 Excavated Hot Spot Sample
3	Analytical Data Summary, Remedial Excavation OA1-RE-1 Stockpile Samples
4	Analytical Data Summary, Remedial Excavation OA1-RE-2 Excavated Hot Spot Sample
5	Analytical Data Summary, Remedial Excavation OA1-RE-2 Stockpile Samples
6	Analytical Data Summary, Remedial Excavation OA1-RE-2 Excavated Confirmation Sample
7	Analytical Data Summary, Remedial Excavation OA1-RE-3 Stockpile Samples
8	Analytical Data Summary, Remedial Excavation OA1-RE-3 Excavated Confirmation Sample
9	Analytical Data Summary, Remedial Excavation OA1-RE-1 Confirmation Samples
10	Analytical Data Summary, Remedial Excavation OA1-RE-2 Confirmation Samples
11	Analytical Data Summary, Remedial Excavation OA1-RE-3 Confirmation Samples
12	Site-Specific Health-Based Soil Screening Values
13	Remedial Excavations OA1-RE-1, OA1-RE-2, and OA1-RE-3 Stockpile Soil Disposition Reference

## **SECTION 1.0**

### **INTRODUCTION**

In October 1996, Montgomery Watson (Montgomery) was retained by McDonnell Douglas Realty Company, now the Boeing Realty Corporation (BRC), to assist with the redevelopment of Parcel A (the Site) of their C-6 Facility located in Los Angeles, California. Figure 1 presents the C-6 Facility. Figure 2 delineates the Site. The Site was formerly used to manufacture and store aircraft parts.

#### **1.1 OVERVIEW**

The Site consists of the northernmost quarter of the C-6 Facility, encompassing approximately 50 acres. Demolition of the following buildings has occurred: Building 29, 33, 34, 36, 37, 40, 41, 43/44, 45, 57, 58, 61, 66-A, and 67.

Information gathered during the data compilation and evaluation phase of this project indicated the presence of petroleum products and other chemicals of concern in the surface and subsurface.

A soil sampling and remedial excavation effort was conducted in conjunction with the removal of foundations, slabs, and below-ground structures. The purpose of this effort was to assess soil quality and remove soil affected with petroleum hydrocarbons and other chemicals of concern in preparation for redevelopment of the Site. Soil which was determined to be affected with petroleum hydrocarbons and other chemicals was excavated and stockpiled at the Site. Confirmation samples were collected along the walls and floor of each remedial excavation to confirm that the surface soil (upper 12 feet) met soil screening criteria.

Stockpiled soil and confirmation samples discussed in this report were generated from remedial excavations conducted in the open area located east of Buildings 37 and 41. For convenience, this area is referred to as "Open Area No. 1" in this report.

#### **1.2 PURPOSE AND OBJECTIVE**

The lead agency for this project is the Los Angeles Regional Water Quality Control Board (RWQCB). The process of screening excavated soil and confirming *in situ* soil quality as presented in this document has been approved by the RWQCB. Following the initial review and implementation of this process, the RWQCB has allowed BRC to undertake excavation and backfilling operations without intermittent agency review. All BRC decisions based upon the approved soil screening process are documented for final agency review and approval. This approach was developed to expedite the soil quality evaluation process, and this report has been prepared to document the process used by BRC to evaluate excavated and residual soil at Site locations discussed herein.

Specifically, the purpose and objectives of this report are:

- 1) To document the quality of the stockpiled soil generated from remedial excavations according to the Facility-wide soil screening criteria, and the process by which the stockpiled soils were divided into two categories: (a) soils requiring treatment or off-site disposal, and (b) soils suitable for use as construction backfill at the Site.
- 2) To document that surface soil (upper 12 feet) in each remedial excavation meets the established soil screening criteria.

## SECTION 2.0

### OPEN AREA NO. 1 REMEDIAL EXCAVATIONS

Open Area No. 1 is located along the eastern portion of the Site, east of Building 37 and Building 41 extending to the Normandie Avenue property boundary. Open Area No. 1 was so designated because of its absence of structures, except for the Building 43/44 water tanks in the northeast corner. Open Area No. 1 formerly included the Gravel Yard, which was used for storage of miscellaneous materials and parts from the manufacturing operations of the Facility. The Facility storm drain outfall to the storm sewer is located near the northeast corner of the area. Historically, a railroad spur crossed Open Area No. 1 trending from south to north.

Building 41 was formerly used as a boiler house. The water tanks located at the former Building 43/44 in the northeast corner of Open Area No. 1 were formerly used to store diesel fuel oil which was pumped into Building 41 through buried product pipelines. These tanks were converted from diesel storage to water tanks (part of the C-6 Facility's fire suppression system) approximately 25 years ago. The abandoned product lines leading from the tanks to Building 41 were discovered during the demolition process, and remedial excavations discussed in this report were conducted to remove primarily hydrocarbon-affected soil associated with releases from these product lines. Remedial excavations discussed in this report were conducted at the southern portion of Open Area No. 1 near the location where the product lines entered Building 41.

The location of each remedial excavation discussed in this report is presented in Figure 3. The 20-foot by 20-foot grid used to reference Building 37 remedial excavations was extended into Open Area No. 1 as presented in Figure 3 for the same purpose. Remedial excavations were recorded using the following nomenclature:

Open Area No. (OA#) - Remedial Excavation (RE) - Chronological Number (#)  
e.g., OA1-RE-1

Pertinent information related to the remedial excavations and the associated stockpiled soil discussed in this report is presented below. The locations of each stockpile are presented in Figure 4 through Figure 7.

Excavation/Stockpile(s)	Approximate Volume	Date of Excavation	Stockpile Location(s)
OA1-RE-1 / A — J	2,500 cu yds total	14 Jul 97 — 16 Jul 97	West of Building 1
OA1-RE-2 / A1/A2 — J	2,500 cu yds total	16 Jul 97 — 18 Jul 97	West of Building 1 and within Building 37 footprint
OA1-RE-3 / A — J	2,500 cu yds total	18 Jul 97 — 21 Jul 97	Within Building 37 footprint

## 2.1 SOIL SAMPLING

Hot spot sampling and confirmation sampling have been employed at Open Area No. 1. Detailed procedures for these activities are outlined in the *Sampling and Analysis Plan for Demolition Activities at the Douglas Aircraft Company C-6 Facility* prepared by Integrated Environmental Services, Inc. (IESI, 1997(a)) which has been reviewed and approved by the RWQCB. In addition, stockpile sampling was performed on the excavated material. These procedures can be summarized as follows:

### 2.1.1 Hot Spot Sampling

Hot spot sampling was conducted at predetermined locations where former items of concern were located (e.g., product lines), and at other locations where demolition activities revealed soil which may have been affected by petroleum hydrocarbons or other chemicals of concern.

Hot spot samples were collected by first exposing “fresh” soil beneath the surface using a stainless steel utensil or similar device. A photoionization detector (PID) was used to measure headspace organic vapor concentrations in the freshly exposed soil at each location. Soil samples were collected for analysis where at least one of the following conditions existed: 1) the headspace volatile organic compound (VOC) reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve:

Product Line (PL) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet)  
e.g., PL-GS-2-2.5'

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Hot spot samples have been analyzed according to the analytical schedule presented in Table 1.

Hot spot sample locations discussed in this report have been subsequently excavated and data collected from these samples are considered representative of the corresponding stockpile soil quality.

### **2.1.2 Stockpile Sampling**

Excavated soil was placed in stockpiles each consisting of approximately 250 cubic yards of soil. Generally, stockpile samples were collected at a frequency of approximately one sample per stockpile. Stockpile samples were collected from the most noticeably affected soil within the stockpile. Samples were collected by using a shovel to cut vertically into the side of a stockpile at each sample location to expose “fresh” soil; samples were then collected from the exposed vertical wall and headspace VOC concentrations were measured using the PID.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve:

Open Area No. (OA#) - Remedial Excavation No.(RE#) - Stockpile Chronological Number (SP#)

e.g., OA1-RE1-SP4

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis.

Stockpile samples have been analyzed according to the analytical schedule presented in Table 1.

### **2.1.3 Confirmation Sampling**

Confirmation sampling was conducted to ensure that residual surface soil (upper 12 feet) met soil screening criteria at each excavation. Confirmation sampling was conducted at a frequency of at least one sample location each 40 feet along the walls and floor of each excavation.

Soil removal continued at a particular location until the following conditions were met: 1) the headspace VOC reading in freshly exposed soil was less than or equal to 5 ppm, and soil staining was not visible, and odors were not noticeable, or 2) the maximum excavation depth of 12 feet had been reached. A confirmation sample was collected when these conditions were met. Iterations of additional soil excavation were conducted as required until confirmation sample analytical data indicated that *in situ* soil quality met the soil screening criteria established in Section 3.1 of this report, or the maximum excavation depth of 12 feet had been reached.

Confirmation soil samples were collected by first exposing “fresh” soil beneath the surface of a wall and floor of an excavation using a stainless steel utensil or similar device. Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve:

Open Area No. (OA#) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet)

e.g., OA1-GS-25-3’

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Confirmation samples have been analyzed according to the analytical schedule presented in Table 1; however, some confirmation sample analyses were limited to target-specific chemicals once such analytes were identified either through previous sampling activities or historical site knowledge.

Some confirmation sample locations discussed in this report have been subsequently excavated and data collected from these samples are considered representative of the corresponding stockpile soil quality. Confirmation samples discussed in the Stockpile Soil Quality section of this report (Section 2.3) were those collected through “pot hole” excavations in the vicinity of the railroad spur. These confirmation samples were collected to: (1) assess whether impacted soil was present, and if so, (2) to confirm the depth to clean, native soil.

Using a backhoe, soil was removed from “pot hole” excavations near the railroad spur to the depth of 4 feet where native soil was believed to occur based on PID readings, observations, and odor. Confirmation samples were collected in the soil brought to the surface in the backhoe bucket. Confirmation soil samples were collected by first exposing “fresh” soil using a stainless steel utensil or similar device. Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet or drive sampler. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps.

A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve:

Railroad Spur (RR) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet)  
e.g., RR-GS-35-4’

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory and analyzed according to the analytical schedule presented in Table 1.

## **2.2 SOIL EXCAVATION**

Remedial excavation to remove affected soil was conducted when one of the following conditions was discovered: (1) elevated PID readings greater than 5 ppm in hot spot samples, (2) visible staining, and (3) noticeable odors. A conservative approach was employed such that soil which exhibited any of these characteristics was excavated and stockpiled.

Remedial excavations were performed using heavy equipment (excavators, front-end loaders, end-dump trucks) associated with the building demolition effort. Air monitoring in accordance with South Coast Air Quality Management District Rule 1166 was conducted throughout remedial excavation activities.

The maximum depth of any excavation was approximately 12 feet below grade. Excavated soil was segregated based on the location from where it was removed. Soil stockpiles were placed on asphalt or plastic sheeting, and covered with plastic sheeting to protect the soil from the elements. The locations of each stockpile are presented in Figure 4 through Figure 7.

## **2.3 STOCKPILE SOIL QUALITY**

Soil removal at Open Area No. 1 began on July 14, 1997 due to PID readings, visual observations, and noticeable odors in soil in the vicinity of the product lines.

### **2.3.1 OA1-RE-1 Stockpiles A through J**

Soil removal at remedial excavation OA1-RE-1 began on July 14, 1997 and was completed on July 16, 1997.

Approximately 2,500 cubic yards of stockpiled soil (Stockpiles A through J) associated with this excavation was removed with an excavator, transported and stockpiled west of Building 1 as shown in Figure 4.

The following types of samples have been collected and analyzed to evaluate the soil quality in OA1-RE-1 Stockpiles A through J:

- Excavated hot spot sample
- Stockpile samples

One hot spot sample was collected along the product lines at the location presented in Figure 8 and the soil around this sample location was later excavated. The analytical data for this sample are summarized in Table 2.

One stockpile sample was collected from each stockpile (Stockpiles A through J). The locations of these samples are presented in Figure 4. Analytical data for these samples are summarized in Table 3.

A complete set of laboratory analytical reports is presented in Appendix A-1.

### **2.3.2 OA1-RE-2 Stockpiles A1/A2 through J**

Remedial excavation OA1-RE-2 was conducted from July 16, 1997 through July 18, 1997. Approximately 500 cubic yards of soil associated with this excavation was removed with an excavator, transported and stockpiled west of Building 1 (Stockpiles A1/A2 and B) as presented in Figure 5. Approximately 2,000 cubic yards of soil associated with this excavation was removed with an excavator, transported and stockpiled within the Building 37 footprint (Stockpiles C through J) as presented in Figure 6.

The following types of samples have been collected and analyzed to evaluate the soil quality in OA1-RE-2 Stockpiles A1/A2 through J:

- Excavated hot spot sample
- Stockpile samples
- Excavated confirmation sample

One hot spot sample was collected along the product line at the location presented in Figure 8 and the soil around this sample location was later excavated. The analytical data for this sample are summarized in Table 4.

Generally, one stockpile sample was collected from each stockpile (Stockpiles A1/A2 through J). The locations of these samples are presented in Figure 5 and Figure 6. Analytical data for these samples are summarized in Table 5.

One confirmation sample was collected at the location presented in Figure 8 and the soil around this sample location was later excavated. The analytical data for this sample are summarized in Table 6.

A complete set of laboratory analytical reports is presented in Appendix A-2.

### **2.3.3 OA1-RE-3 Stockpiles A through J**

Soil removal at remedial excavation OA1-RE-3 began on July 18, 1997 and was completed on July 21, 1997.

Approximately 2,500 cubic yards of stockpiled soil associated with this additional excavation was removed with an excavator, transported and stockpiled within the Building 37 footprint as shown in Figure 7.

The following types of samples have been collected and analyzed to evaluate the soil quality in OA1-RE-3 Stockpiles A through J:

- Stockpile samples
- Excavated confirmation sample

One stockpile sample was collected from each stockpile (Stockpiles A through J). The locations of these samples are presented in Figure 7. Analytical data for these samples are summarized in Table 7.

One confirmation sample was collected at the location presented in Figure 8 and the soil around this sample location was later excavated. The analytical data for this sample are summarized in Table 8.

A complete set of laboratory analytical reports is presented in Appendix A-3.

## **2.4 CONFIRMATION SAMPLING**

### **2.4.1 OA1-RE-1 Remedial Excavation**

Thirteen confirmation samples were collected at locations presented in Figure 9. Analytical data are summarized in Table 9. A complete set of analytical data is presented in Appendix B-1.

### **2.4.2 OA1-RE-2 Remedial Excavation**

Fifteen confirmation samples were collected at locations presented in Figure 10. The analytical data for these samples are summarized in Table 10. A complete set of laboratory analytical reports is presented in Appendix B-2.

### **2.4.3 OA1-RE-3 Remedial Excavation**

Twenty confirmation samples were collected at locations presented in Figure 11. The analytical data for these samples are summarized in Table 11. A complete set of laboratory analytical reports is presented in Appendix B-3.

## SECTION 3.0

### DATA SUMMARY AND CONCLUSIONS

This section presents soil screening criteria and the methodology used throughout the project to evaluate: (1) whether the soil stockpiles were suitable for use as backfill, or required treatment and/or off-site disposal, and (2) whether all affected soil has been removed, or if additional excavation of affected soil is warranted.

#### 3.1 SOIL SCREENING CRITERIA

The soil screening criteria have been developed to satisfy two primary objectives: (1) residual concentrations in backfill material and surface soil must be below levels projected to impact underlying drinking water sources, and (2) residual concentration in backfill materials and surface soil must be below levels projected to potentially impact human health under future construction and commercial/industrial activities at the Site.

In accordance with these objectives, soil screening criteria were developed for both drinking water and human health protection. The development of these soil screening criteria is discussed below followed by a summary of how these values were implemented.

##### 3.1.1 Drinking Water

The generalized hydrostratigraphic succession at the Site is as follows (Kennedy/Jenks, 1996(b); Dames & Moore, 1993; Department of Water Resources, 1961):

###### SURFACE

Bellflower Aquitard

Gage Aquifer

El Segundo Aquitard

Lynwood Aquifer

Depth to groundwater at the Site is approximately 65 feet. Hydrostratigraphic information from voluminous data collected at the neighboring Del Amo and Montrose Chemical Superfund Sites can be correlated with subsurface information collected at the Site. Hydrostratigraphic correlations suggest that the shallowest groundwater at the Site occurs in the Bellflower Aquitard, which is not recognized as a drinking water source in the region (Dames & Moore, 1993).

Although the depth to the top of the Gage Aquifer should vary from approximately 120 to 150 feet (from west to east) across the Site, the Gage Aquifer is not utilized as a source of drinking water in the region (Dames & Moore, 1993). Consequently, the shallowest drinking water resource in the region would therefore be the Lynwood Aquifer, projected to occur at the depths of approximately 210 to 240 feet (from west to east) across the Site.

Based on the depth to the first drinking water source, the following permissible concentrations to 12 feet below ground surface have been approved by the RWQCB:

Analytes	Permissible Level
TRPH	
C4 - C12	2,000 mg/kg
C13 - C22	10,000 mg/kg
C22+	50,000 mg/kg
Metals	TTLC and STLC

Notes:

TTLC: Total Threshold Limit Concentration per CCR Title 22.

STLC: Soluble Threshold Limit Concentration per CCR Title 22.

A Waste Extraction Test (WET) is performed on samples with total metal concentration(s) greater than 10 times the STLC but less than the TTLC, per CCR Title 22.

### 3.1.2 Human Health

Site-specific health-based soil screening values were developed by Integrated Environmental Services, Inc. using standard United States Environmental Protection Agency (USEPA) and California Environmental Protection Agency (Cal/EPA) methodologies. These values were derived assuming future commercial industrial land use with an interim construction phase. Each value will be used as a predictor of the risk posed by individual VOC, SVOC, PCB, and metal contaminants in soil. The additive effects of multiple contaminants have been accounted for by setting conservative target risk levels at  $1 \times 10^{-6}$  for carcinogens and 0.2 for toxicants. The final cumulative risks for all residual contaminants at the Site will be addressed in the post-remedial risk assessment. Table 12 summarizes the Site-specific health-based soil screening values to be used at the Site. A more detailed discussion of the methodologies used to derive these values has been presented in the *Health-Based Remediation Goals for Surface Soils* document (IESI, 1997(b)).

### **3.1.3 Evaluation Process**

#### **STOCKPILE SOIL**

All soil excavated at the Site was subjected to the soil screening evaluation process depicted in Figure 12. This evaluation process incorporates both drinking water and human health-based criteria. Soils that failed any portion of this test were subjected to treatment prior to use as backfill, or were disposed of off-site. Once soils passed all aspects of the evaluation procedure, they were used for backfill.

Additionally, metal concentration(s) in stockpiled soils were used to further characterize the waste soil as follows:

- a) Stockpiled soils were classified as non-RCRA hazardous waste if representative soil samples contained any metal in total concentration equal to or greater than its respective TTLC per CCR Title 22.
- b) Representative soil samples were analyzed for soluble metal concentration using the Waste Extraction Test (WET) if the total concentration of any metal was equal to or greater than 10 times its respective STLC but less than its TTLC per CCR Title 22. Stockpiled soil was classified as non-RCRA hazardous waste if representative soil samples contained any metal in soluble concentration using the WET equal to or greater than its respective STLC per CCR Title 22.
- c) Additionally, stockpile soil samples which were analyzed using the WET were also analyzed for soluble metal concentrations using the Toxic Characteristic Leaching Procedure (TCLP). Stockpiled soil was classified as a RCRA characteristic hazardous waste if the soluble concentration of any metal using the TCLP was equal to or greater than the toxicity characteristic (TC) per CCR Title 22.

#### **CONFIRMATION SAMPLES**

All confirmation soil data at the Site was subjected to the soil screening evaluation process depicted in Figure 13. This evaluation process incorporates both drinking water and human health-based criteria. Additional soil excavation and/or treatment was conducted at locations where confirmation sample data failed any portion of this test, and the maximum excavation depth of 12 feet had not been reached.

## 3.2 STOCKPILE EVALUATIONS

Chemicals of concern at the Site can be summarized as follows:

- Petroleum hydrocarbons
- VOCs
- SVOCs
- PCBs
- Metals

The sampling and analysis program for remedial excavations discussed in this report was conservatively focused on these chemicals of concern by implementing the following analytical schedule:

- All samples were analyzed for TRPH and metals.
- All samples which contained TRPH in concentration greater than 10,000 mg/kg were subsequently analyzed for carbon chain length.
- All stockpile samples were additionally analyzed for VOCs and SVOCs.
- Stockpile samples were additionally analyzed for PCBs at a frequency of one sample per remedial excavation.
- All hot spot samples collected along the product lines were analyzed for VOCs, SVOCs, PCBs, and fuel characterization.
- Railroad spur confirmation samples were analyzed for PCBs, and selectively analyzed for VOCs, SVOCs, and fuel characterization based on field observations.

Stockpile evaluations and dispositions are discussed below and summarized in Table 13.

### 3.2.1 OA1-RE-1 Stockpiles A through J

Soil samples (hot spot and stockpile) associated with Stockpiles A through J are cross-referenced in Table 13. Analytical data associated with these samples are presented in Table 2 and Table 3. These data are summarized and evaluated below.

Petroleum Hydrocarbons: Hot spot sample PL-GS-1-2.5' (Stockpile J) contained the highest concentration of TRPH (16,000 mg/kg). This sample exceeded the permissible limit for the C13 - C22 hydrocarbon chain range.

VOCs: VOCs were detected in nine samples; however, all VOC concentrations were below Site-specific health-based soil screening values.

**SVOCs:** Samples representative of soil quality in Stockpiles A, B, G, I, and J exceeded the Site-specific health-based soil screening value for at least one compound as depicted in Table 2 and Table 3.

**PCBs:** PCBs were not detected.

**Metals:** Stockpile samples OA1-RE1-SP1 (Stockpile A), OA1-RE1-SP2 (Stockpile B), OA1-RE1-SP5 (Stockpile E), OA1-RE1-SP7 (Stockpile G), and hot spot sample PL-GS-1-2.5' (Stockpile J) exceeded 10 times the STLC for chromium; however, these samples did not meet or exceed the STLC when analyzed using the WET, or the TC when analyzed using the TCLP. Stockpile samples OA1-RE1-SP1 (Stockpile A), OA1-RE-1-SP2 (Stockpile B), and hot spot sample PL-GS-1-2.5' (Stockpile J) exceeded the Site-specific health-based soil screening value for lead. None of the other samples met or exceeded TTLC, 10 times the STLC, or Site-specific health-based soil screening values.

**Conclusion:** The following stockpiles fail the soil screening criteria established in Section 3.1 of this report as follows:

Stockpile A	lead* / SVOCs*
Stockpile B	lead* / SVOCs*
Stockpile G	SVOCs*
Stockpile I	SVOCs*
Stockpile J	lead* / SVOCs* / TRPH carbon chain

(\* Exceeds the Site-specific health-based screening value(s))

Most of Stockpiles A, B, G, I, and J have been removed from the Site for proper disposal as non-hazardous waste. Non-hazardous waste disposal documentation is presented in Appendix C. Off-site disposal documentation for the remainder of Stockpiles A, B, G, I, and J will be provided in an addendum to this report.

The data show that Stockpiles C, D, E, F, and H met the soil screening criteria and therefore were used as backfill material.

### **3.2.2 OA1-RE-2 Stockpiles A1/A2 through J**

Soil samples (hot spot, stockpile, and confirmation) associated with Stockpiles A1/A2 through J are cross-referenced in Table 13. Analytical data associated with these samples are presented in Table 4, Table 5, and Table 6. These data are summarized and evaluated below.

**Petroleum Hydrocarbons:** Stockpile sample OA1-RE2-SP4 (Stockpile D) exceeded the permissible limit for the C13 - C22 hydrocarbon chain range. Hot spot sample PL-GS-2-2.5' (Stockpile E) exceeded the permissible limit for hydrocarbon chain ranges C4 - C12 and C13 - C22.

VOCs: VOCs were detected in 12 samples; however, all VOC concentrations were below Site-specific health-based soil screening values.

SVOCs: Samples representative of soil quality in Stockpiles A1/A2, C, D, E, F, G, H, I, and J exceeded the Site-specific health-based soil screening value for at least one compound as depicted in Table 4 and Table 5.

PCBs: PCBs were not detected.

Metals: Stockpile samples OA1-RE2-SP5 (Stockpile E) and OA1-RE2-SP7 (Stockpile G) exceeded 10 times the STLC for chromium; however, these samples did not meet or exceed the STLC when analyzed using the WET, or the TC when analyzed using the TCLP. Stockpile samples OA1-RE2-SP5 (Stockpile E) and OA1-RE2-SP7 (Stockpile G) contained lead in excess of the Site-specific health-based soil screening value; each of these samples also exceeded the STLC for lead when analyzed using the WET, but did not meet or exceed the TC for lead when analyzed using the TCLP. No other sample met or exceeded the TTLC, 10 times the STLC, or Site-specific health-based soil screening values.

Conclusion: The following stockpiles fail the soil screening criteria established in Section 3.1 of this report as follows:

Stockpile A1/A2	SVOCs*
Stockpile C	SVOCs*
Stockpile D	SVOCs* / TRPH carbon chain
Stockpile E+	lead* >STLC / SVOCs* / TRPH carbon chain
Stockpile F	SVOCs*
Stockpile G+	lead* >STLC / SVOCs*
Stockpile H	SVOCs*
Stockpile I	SVOCs*
Stockpile J	SVOCs*

(\* Exceeds the Site-specific health-based screening value(s))

The “+” symbol denotes stockpiles E and G which exceeded the STLC for lead and were removed from the Site and properly disposed of as non-RCRA hazardous waste, with the exception of a portion of Stockpile E. Non-RCRA hazardous waste disposal documentation is presented in Appendix D. Off-site disposal documentation for the remainder of Stockpile E will be provided in an addendum to this report. The remaining stockpiles listed above were removed from the Site and properly disposed of as non-hazardous waste, with the exception of a portion of Stockpile A1/A2. Non-hazardous waste disposal documentation is presented in Appendix C. Off-site disposal documentation for the remainder of Stockpile A1/A2 will be provided in an addendum to this report.

The data show that Stockpile B met the soil screening criteria and therefore was used as backfill material.

### 3.2.3 OA1-RE-3 Stockpiles A through J

Soil samples (stockpile and confirmation) associated with Stockpiles A through J are cross-referenced in Table 13. Analytical data associated with these samples are presented in Table 7 and Table 8. These data are summarized and evaluated below.

Petroleum Hydrocarbons: Stockpile sample OA1-RE3-SP3 (Stockpile C) contained the highest concentration of TRPH (1,700 mg/kg). This concentration is below the permissible concentration limit and therefore TRPH was not speciated.

VOCs: VOCs were detected in eight samples; however, all VOC concentrations were below Site-specific health-based soil screening values.

SVOCs: Samples representative of soil quality in Stockpiles B, C, and E exceeded the Site-specific health-based soil screening value for at least one compound as depicted in Table 7.

PCBs: PCBs were not detected.

Metals: Stockpile samples OA1-RE3-SP6 (Stockpile F), OA1-RE3-SP8 (Stockpile H), OA1-RE3-SP9 (Stockpile I), and OA1-RE3-SP10 (Stockpile J) exceeded 10 times the STLC value for chromium, but did not exceed the STLC when analyzed using the WET or the TC when analyzed using the TCLP. No other sample met or exceeded TTLC, 10 times the STLC, or Site-specific health-based soil screening values.

Conclusion: The following stockpiles fail the soil screening criteria established in Section 3.1 of this report as follows:

Stockpile B	SVOCs*
Stockpile C	SVOCs*
Stockpile E	SVOCs*

(\* Exceeds the Site-specific health-based screening value(s))

These stockpiles were removed from the Site and properly disposed of as non-hazardous waste. Non-hazardous waste disposal documentation is presented in Appendix C.

The data show that Stockpiles A, D, F, G, H, I, and J met the soil screening criteria and therefore were used as backfill material.

### 3.3 IN-SITU SOIL QUALITY

The post-remedial excavation confirmation sampling analytical program (see Table 1) was designed to ensure that residual soils (upper 12 feet) meet the soil screening criteria.

#### 3.3.1 OA1-RE-1 Remedial Excavation

Confirmation sample data are presented in Table 9 and can be summarized as follows:

Petroleum Hydrocarbons: The maximum concentration of TRPH in a confirmation sample collected from this remedial excavation was 1,000 mg/kg (sample OA1-GS-14-12'). This concentration is below the permissible limits for petroleum hydrocarbons and therefore TRPH was not speciated.

VOCs: VOCs were detected in two remedial excavation confirmation samples; however, all VOC concentrations were below Site-specific health-based soil screening values.

SVOCs: Benzo(a)pyrene was detected in remedial excavation confirmation sample OA1-GS-14-12' in concentration of 2.60 mg/kg. This concentration exceeds the Site-specific health-based soil screening value for this compound of 1.14 mg/kg; however, the sample was collected from the depth of 12 feet (the maximum depth of excavation). Various SVOCs were detected in other remedial excavation confirmation samples; however, none were reported in concentration which met or exceeded Site-specific health-based soil screening values.

PCBs: PCBs were not detected in remedial excavation confirmation samples.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and Site-specific health-based soil screening values.

Conclusion: Benzo(a)pyrene was detected in one confirmation sample in concentration greater than its Site-specific health-based soil screening value; however, this sample was collected from the maximum depth of the excavation of 12 feet. The data show that the residual soils in the OA1-RE-1 excavation met the soil screening criteria established in Section 3.1 of this report. Accordingly, this remedial excavation was backfilled.

#### 3.3.2 OA1-RE-2 Remedial Excavation

Confirmation sample data are presented in Table 10 and can be summarized as follows:

Petroleum hydrocarbons: The maximum concentration of TRPH in a confirmation sample collected from this remedial excavation was 6,300 mg/kg (sample OA1-GS-15-12'). This concentration is below the permissible limit for petroleum hydrocarbons and therefore TRPH was not speciated.

VOCs: VOCs were detected in two samples; however, all VOC concentrations were below Site-specific health-based soil screening values.

SVOCs: Benzo(a)pyrene was detected in confirmation sample OA1-GS-16-12' in concentration of 2.30 mg/kg. This concentration exceeds the Site-specific health-based soil screening value for this compound of 1.14 mg/kg; however, the sample was collected from the depth of 12 feet (the maximum depth of excavation). Various SVOCs were detected in other samples; however, none were reported in concentration which met or exceeded Site-specific health-based soil screening values.

PCBs: PCBs were not detected.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and Site-specific health-based soil screening values.

**Conclusion:** Benzo(a)pyrene was detected in one confirmation sample in concentration greater than its Site-specific health-based soil screening value; however, this sample was collected from the maximum depth of the excavation of 12 feet. The data show that the residual soils in the OA1-RE-1 excavation met the soil screening criteria established in Section 3.1 of this report. Accordingly, this remedial excavation was backfilled.

### **3.3.3 OA1-RE-3 Remedial Excavation**

Confirmation sample data are presented in Table 11 and can be summarized as follows:

Petroleum hydrocarbons: The maximum concentration of TRPH in confirmation samples collected from this remedial excavation was 25 mg/kg (samples OA1-GS-17-12' and OA1-GS-40-6'). This concentration is below the permissible limit for petroleum hydrocarbons and therefore TRPH was not speciated.

VOCs: Trichloroethene (maximum concentration 0.011 mg/kg ) was the only VOC detected; however, this concentration is below its respective Site-specific health-based soil screening value of 1,050 mg/kg.

SVOCs: Various SVOCs were detected; however, none were reported in concentration which met or exceeded Site-specific health-based soil screening values.

PCBs: PCBs were not detected.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and Site-specific health-based soil screening values.

**Conclusion:** The data show that the residual soils in the OA1-RE-3 excavation met the soil screening criteria established in Section 3.1 of this report. Accordingly, this remedial excavation was backfilled.

## SECTION 4.0

### REFERENCES

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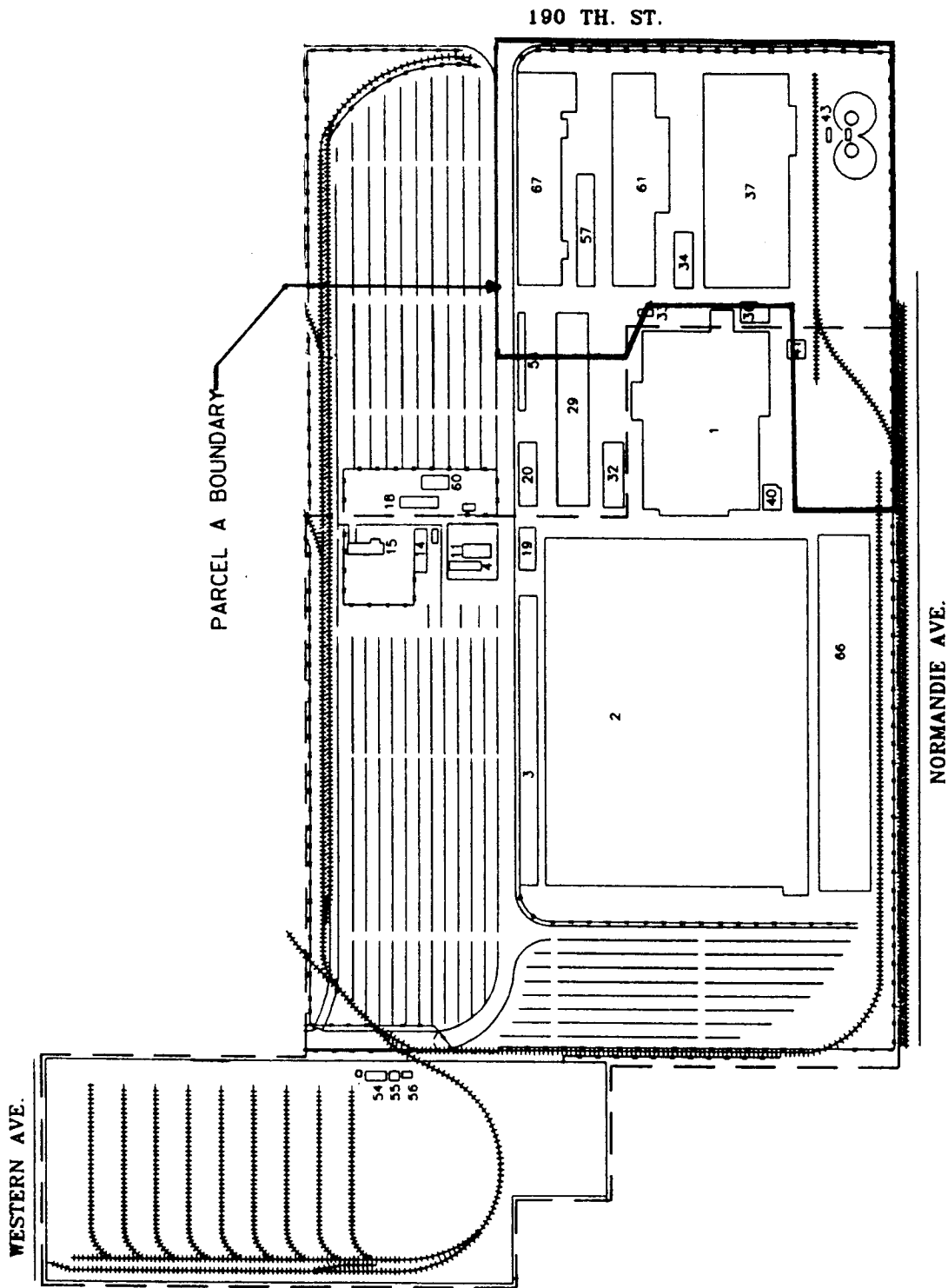
## Figures

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Figures



**MONTGOMERY WATSON**



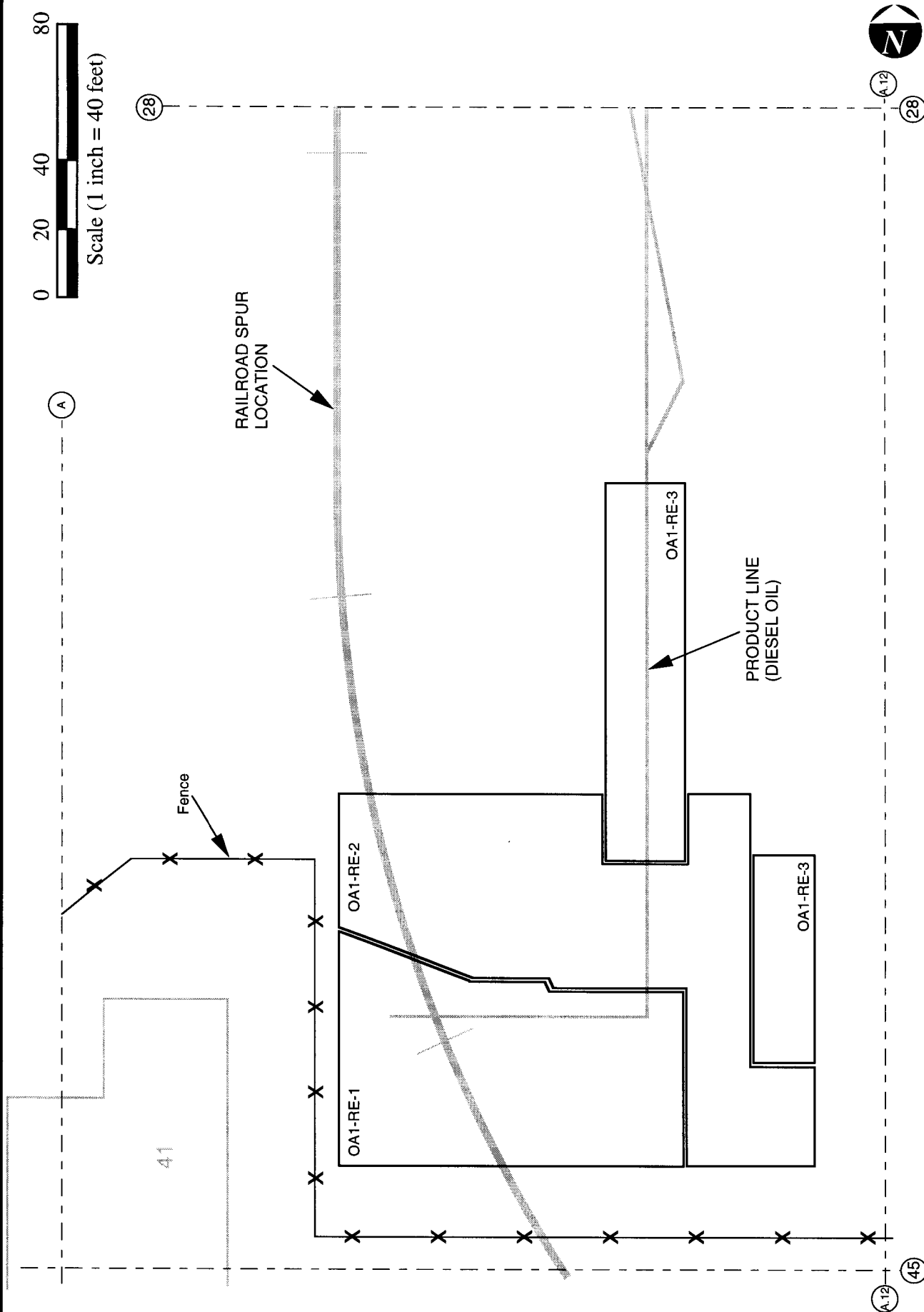
MONTGOMERY WATSON

C-6 FACILITY MAP

FIG. 1



g:/MDRC/BACKFILL/STOCKPIL/4thpr/Revision/Fig38

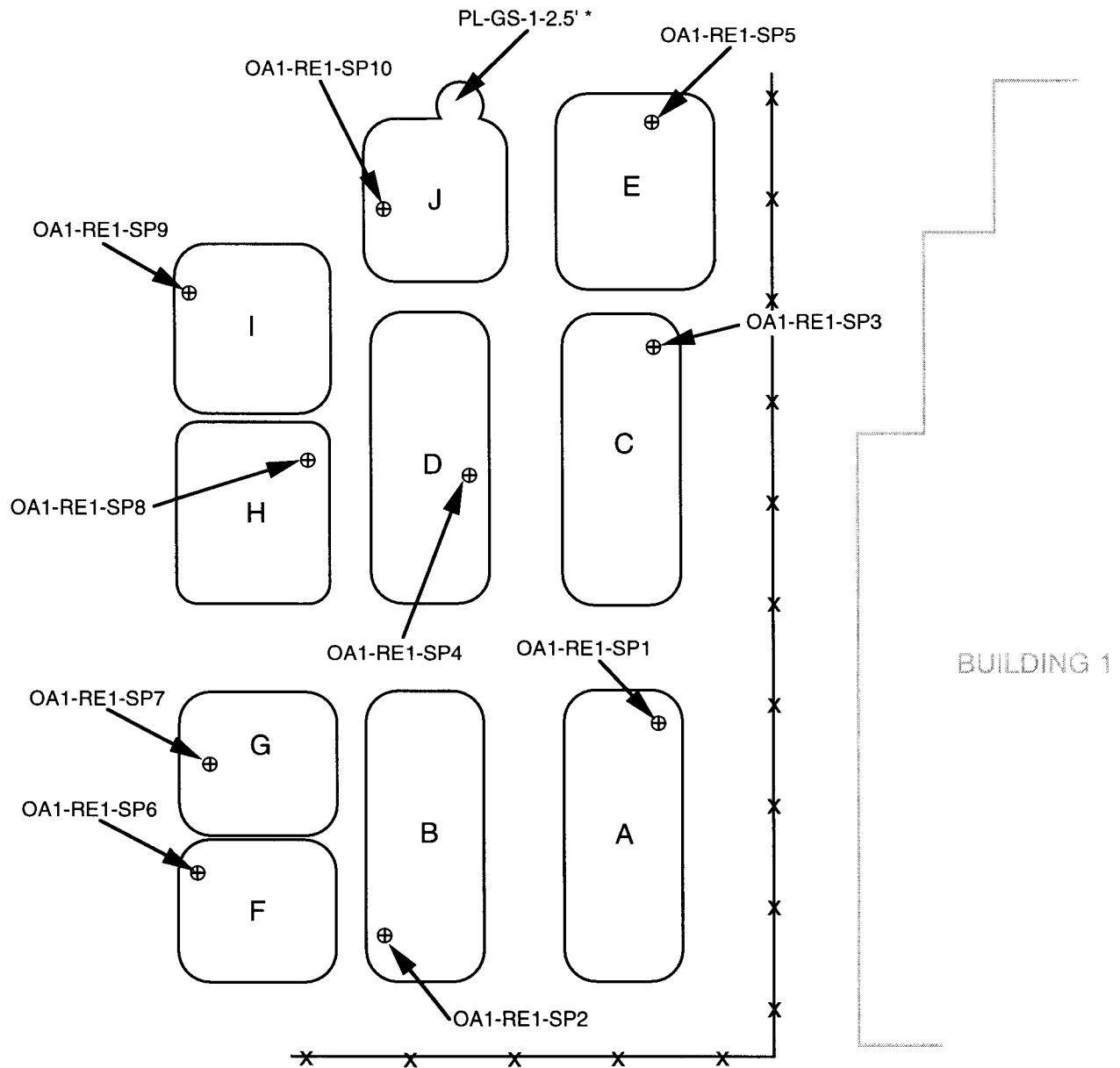


BOEING REALTY CORPORATION  
C-6 FACILITY

FIGURE 3

Remedial Excavations OA1-RE-1, OA1-RE-2, and OA1-RE-3 Locations

Not to Scale



g:/MDRC/BACKFILL/STOCKPIL/4thp/Revision/Fg4567

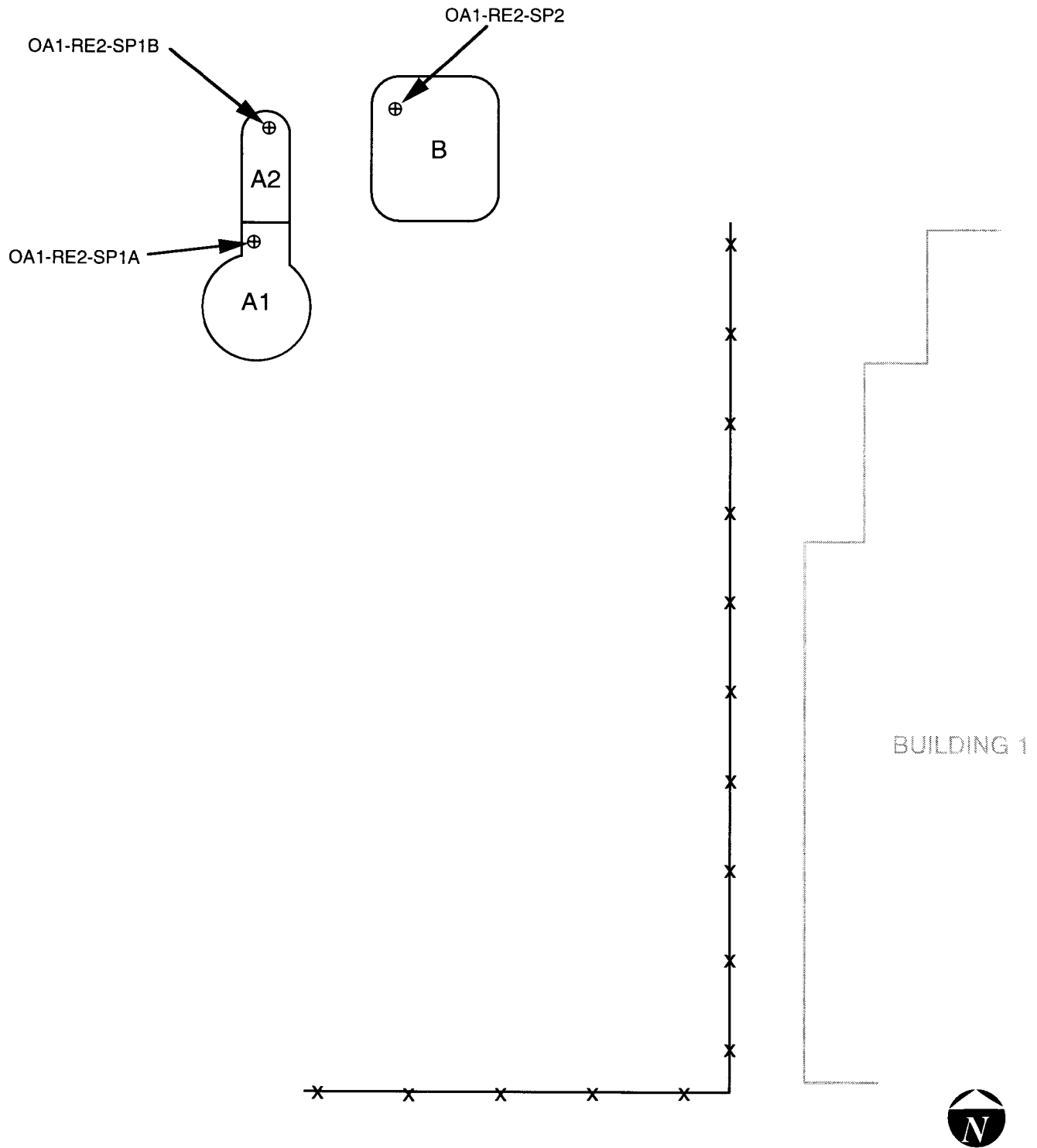
\* See Figure 8 for this Hot Spot Sample Location

BOEING REALTY CORPORATION  
C-6 FACILITY

**Remedial Excavation OA1-RE-1 Stockpiles and Sample Locations**

**FIGURE 4**

Not to Scale



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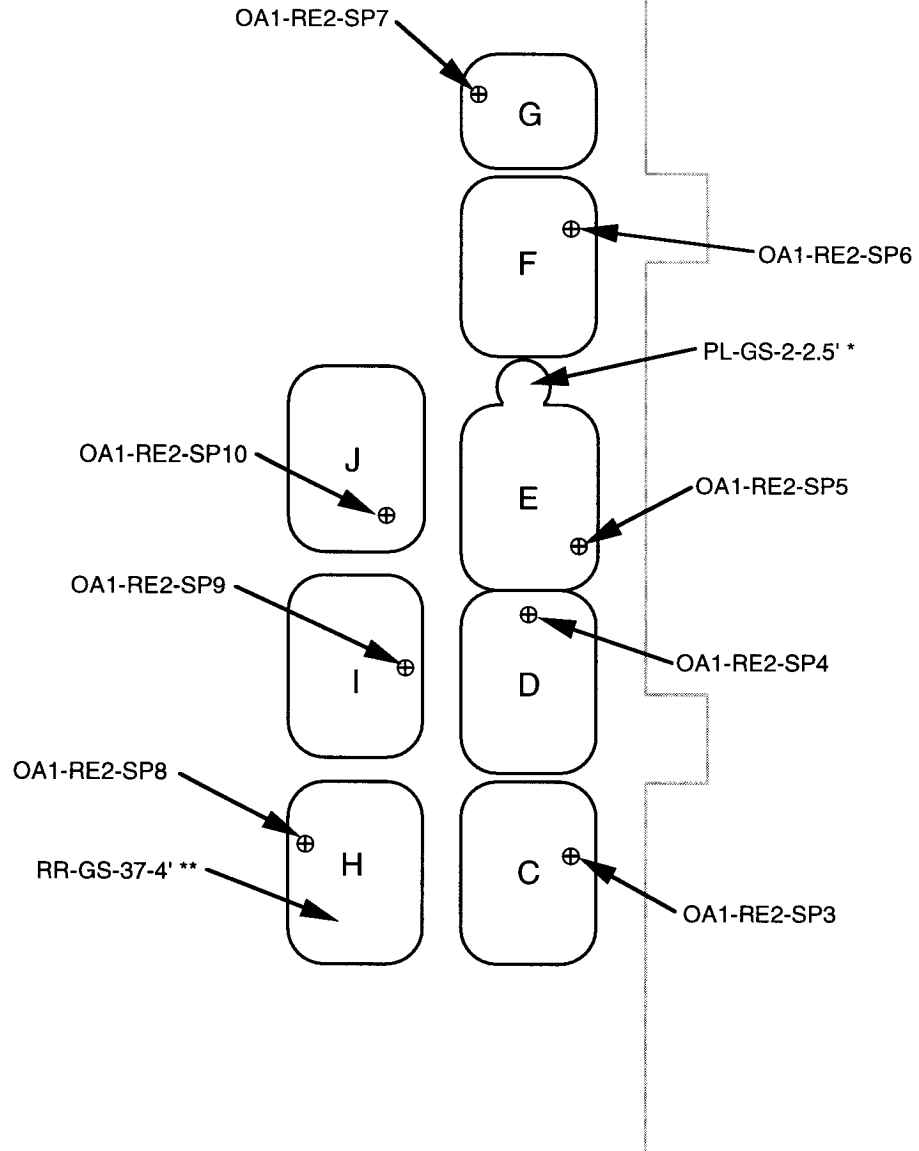
BOEING REALTY CORPORATION  
C-6 FACILITY

**Remedial Excavation OA1-RE-2 Stockpiles A1/A2 and B  
Stockpiles and Sample Locations**

**FIGURE 5**

Not to Scale

BUILDING 37



\* See Figure 8 for this Hot Spot Sample Location

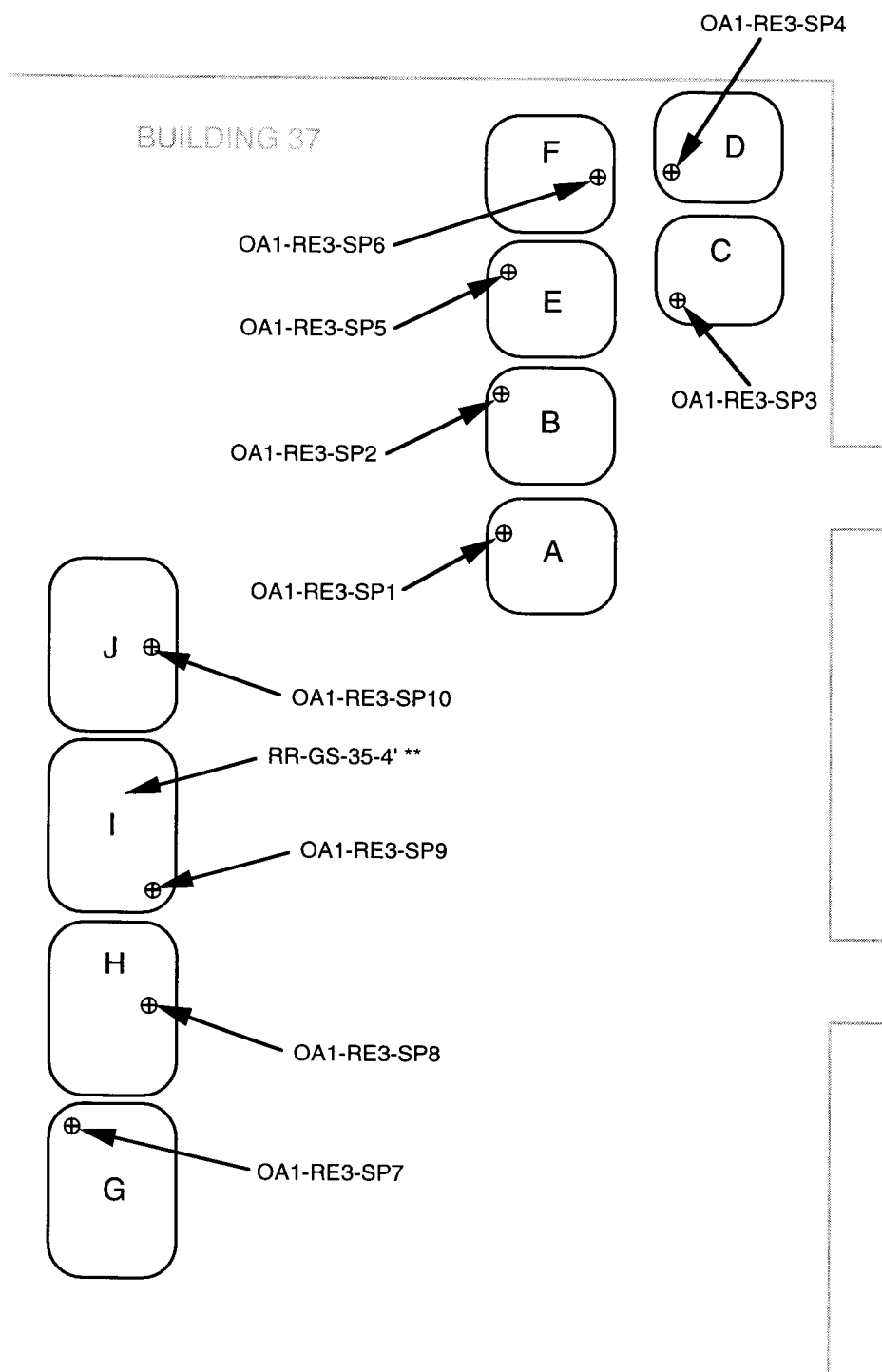
\*\* See Figure 8 for this Confirmation Sample Location

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C-6 FACILITY

**Remedial Excavation OA1-RE-2 Stockpiles C through J  
Stockpiles and Sample Locations**

**FIGURE 6**

Not to Scale

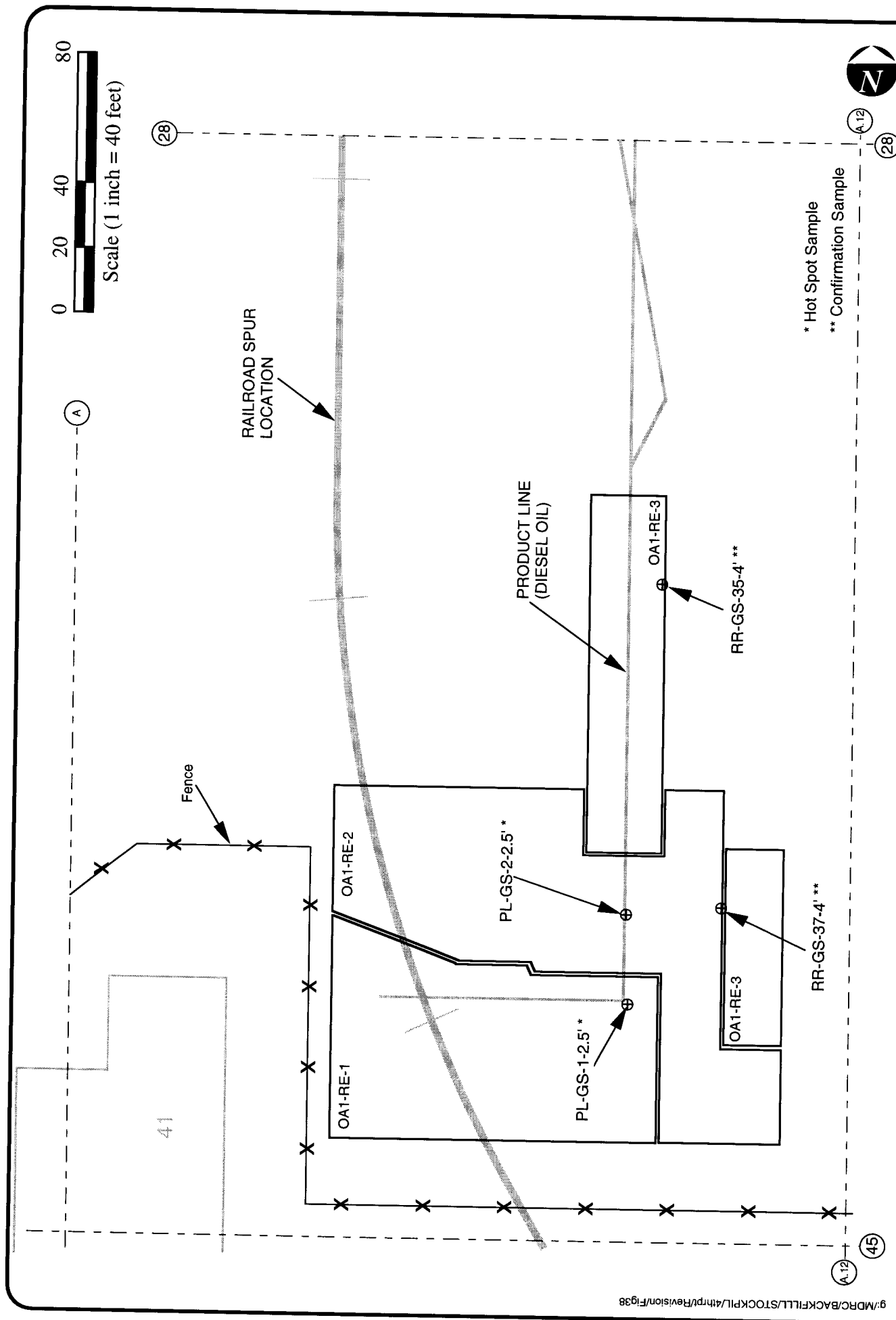


\*\* See Figure 8 for this Confirmation Sample Location

BOEING REALTY CORPORATION  
C-6 FACILITY

Remedial Excavation OA1-RE-3 Stockpiles and Sample Locations

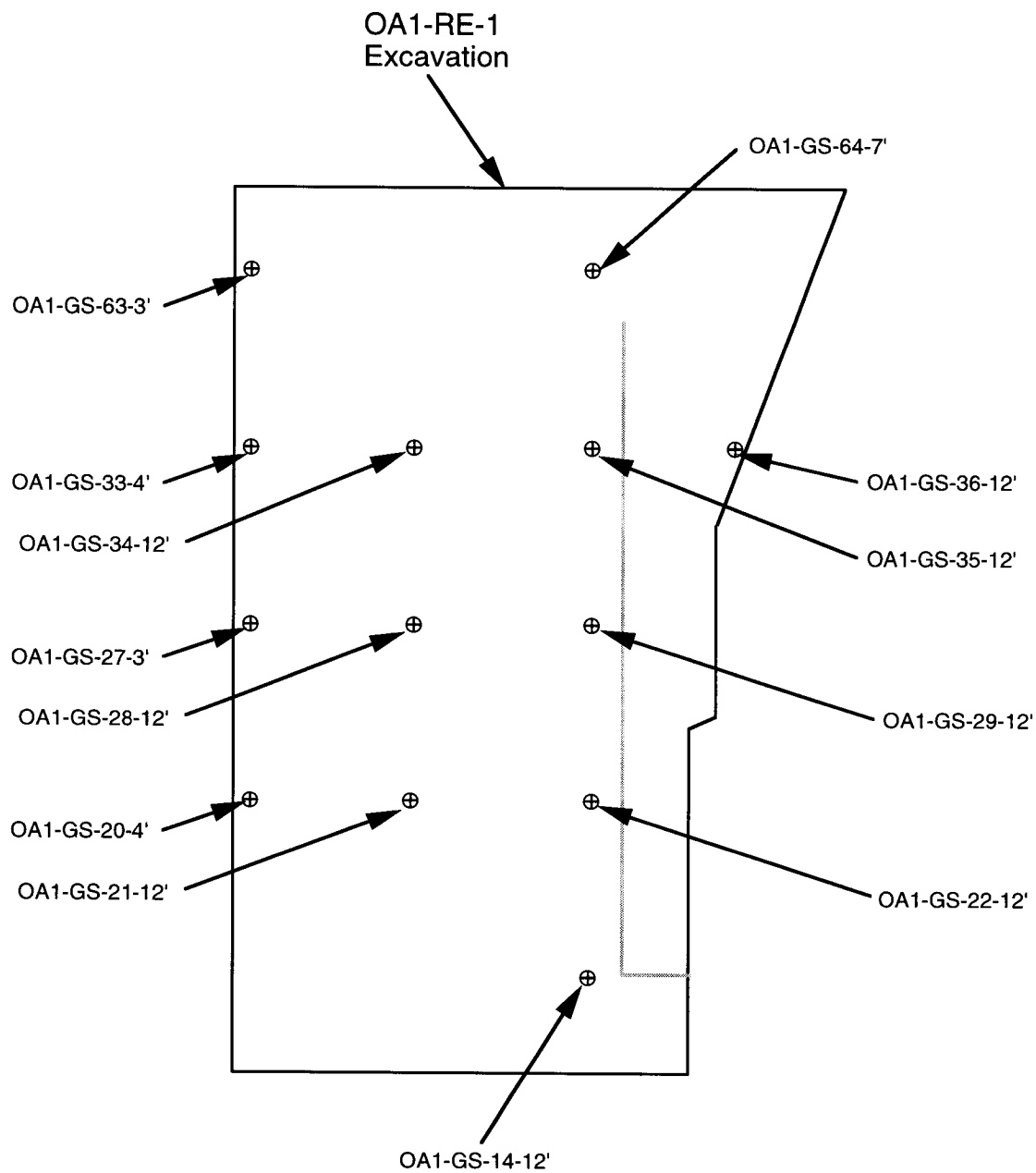
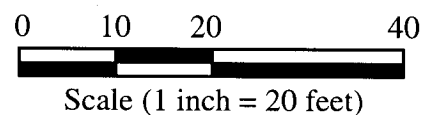
FIGURE 7



BOEING REALTY CORPORATION  
C-6 FACILITY

FIGURE 8

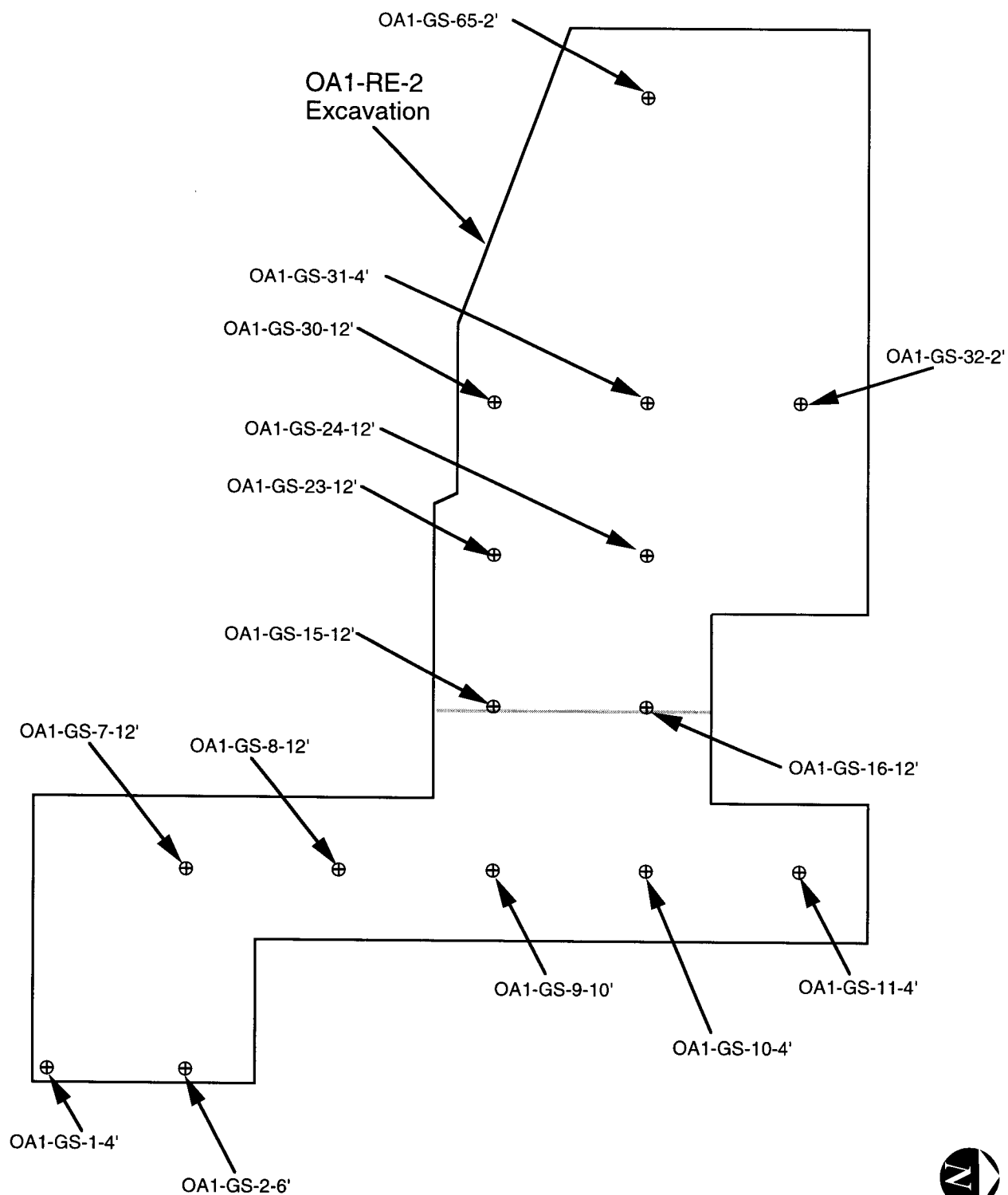
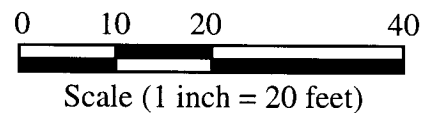
Excavated Hot Spot and Confirmation Sample Locations



BOEING REALTY CORPORATION  
C-6 FACILITY

**FIGURE 9**

**Remedial Excavation OA1-RE-1 Confirmation Sample Locations**



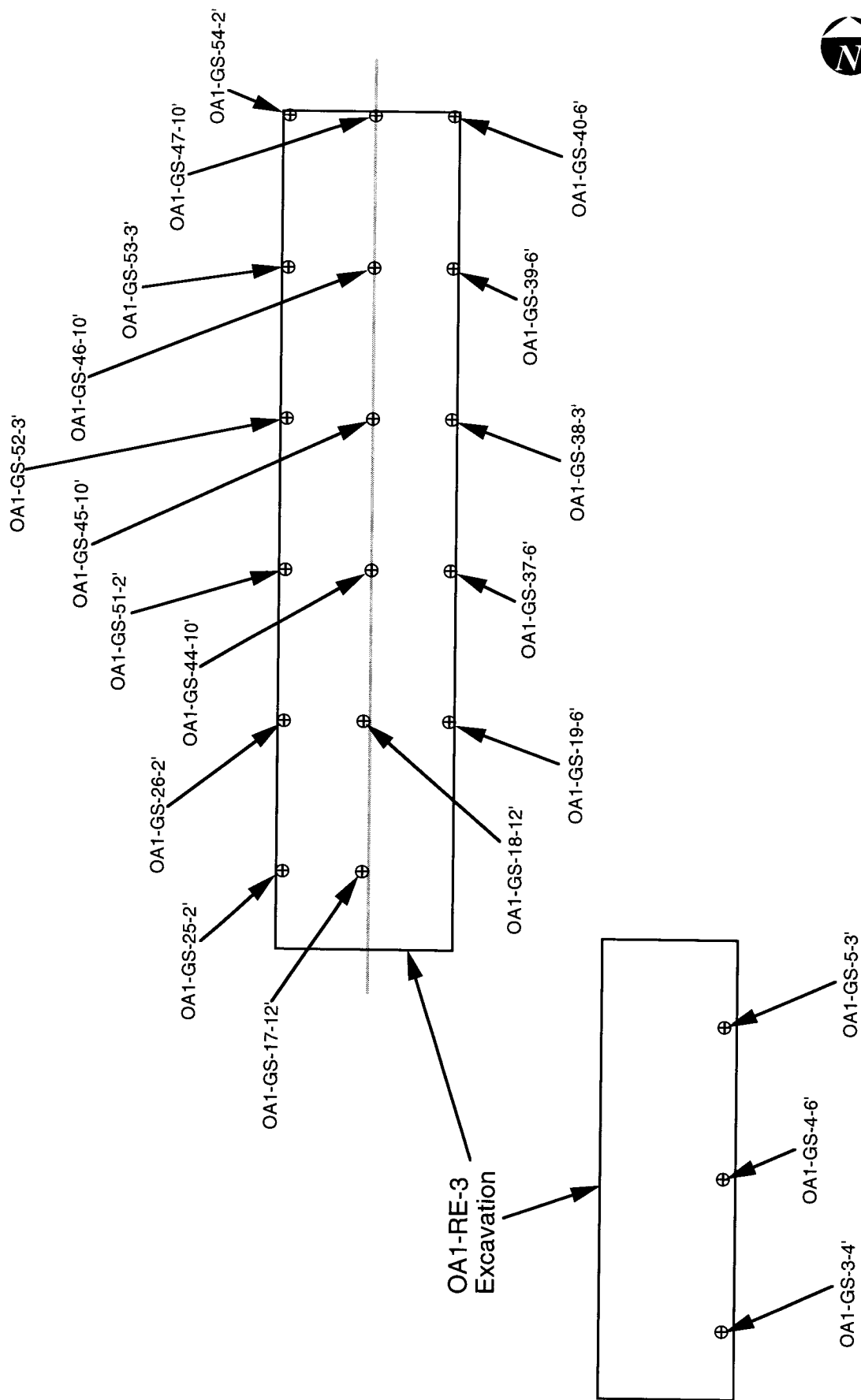
g:\MDC\BACKFILL\STOCKPIL\4thrp\Revision\Fig910

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C-6 FACILITY

FIGURE 10

Remedial Excavation OA1-RE-2 Confirmation Sample Locations

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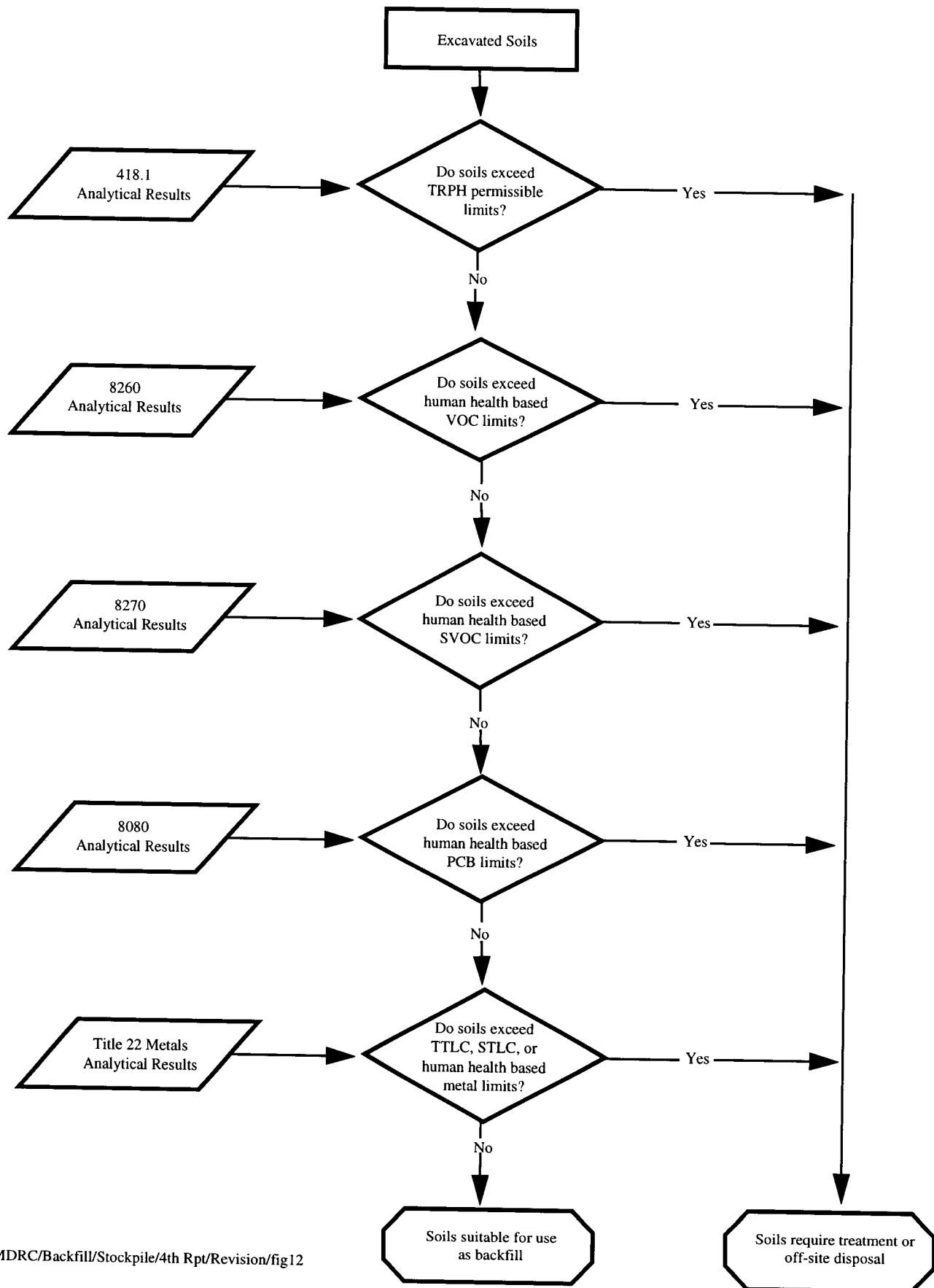


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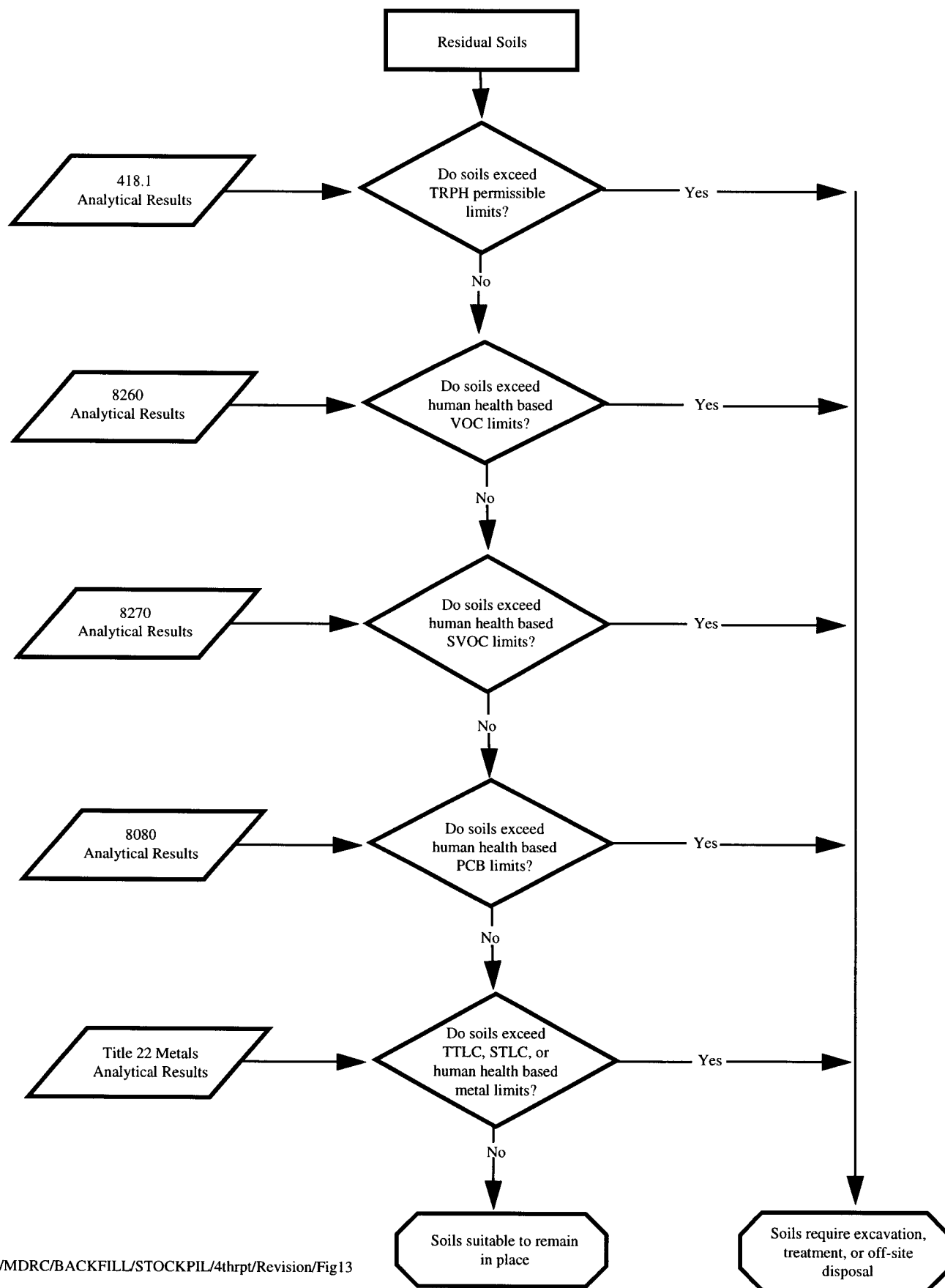
FIGURE 11

Remedial Excavation OA1-RE-3 Confirmation Sample Locations

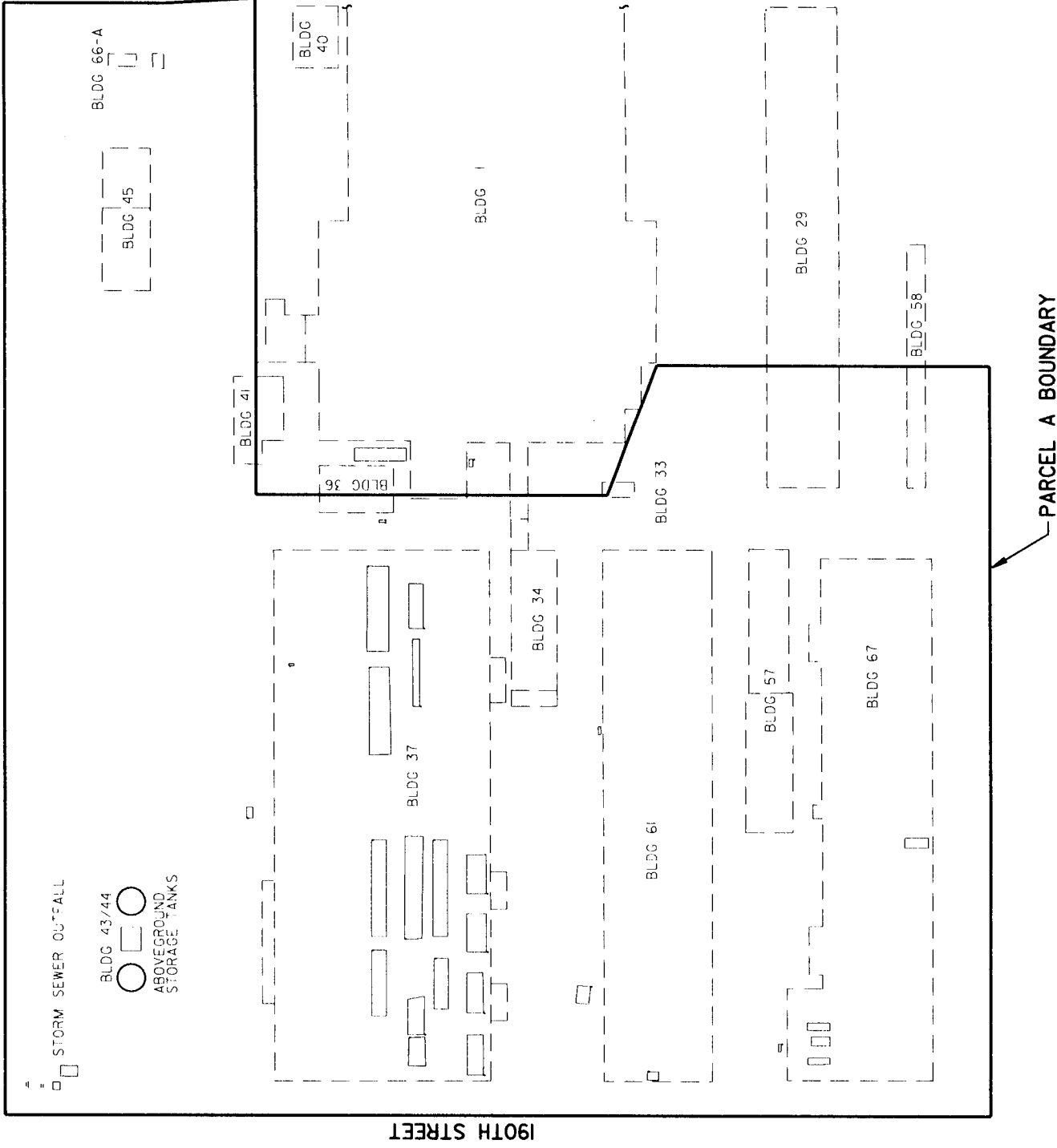
**FIGURE 12**  
**Soil Screening Evaluation Process - Excavated Soil**



**FIGURE 13**  
**Soil Screening Evaluation Process - Residual Soil**



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BASE MAP DEVELOPED FROM TAIT & ASSOCIATES INC.  
SURVEY DRAWING DATED 10/22/96.

REV		DATE	BY	DESCRIPTION	SCALE:		DESIGNED		SUBMITTED		MONTGOMERY WATSON		APPROVED		BOEING REALTY CORPORATION		SHEET
					AS SHOWN		DRAWN: N. CHRAKIAN		PROJECT ENGINEER		R. C. E. NO.		DATE		PARCEL A		FIG. 2
							CHECKED: S. REINERS		RECOMMENDED		R. C. E. NO.		DATE		SITE MAP		OF 2 SHEETS

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## Tables

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**MONTGOMERY WATSON**

**TABLE 1****Summary of Soil Sample Analytical Methods**

<b>Sample Type</b>	<b>EPA Method</b>	<b>Analyte</b>
Hot Spot Sample	418.1 6000/7000 8260 8270 8080 8015M	TRPH (a) Metals VOCs SVOCs PCBs Fuel Characterization
Stockpile Sample	418.1 6000/7000 8260 8270 8080	TRPH (a) Metals VOCs SVOCs PCBs (b)
Confirmation Sample	418.1 6000/7000 8260 8270 8080 8015M	TRPH (a) Metals VOCs (c) SVOCs (c) PCBs (d) Fuel Characterization (e)

Notes:

TRPH Total Recoverable Petroleum Hydrocarbons

VOCs Volatile Organic Compounds

SVOCs Semi-volatile Organic Compounds.

PCBs Polychlorinated Biphenyls

(a) Samples exhibiting TRPH concentration greater than 10,000 mg/kg were submitted for carbon chain analysis.

(b) One sample per remedial excavation.

(c) The number of confirmation samples analyzed for VOCs and SVOCs is approximately equal to the number of stockpile samples analyzed for VOCs and SVOCs. Confirmation samples are selected for analysis of VOCs and SVOCs based on highest TRPH concentration, and location of evenly spaced confirmation sample locations.

(d) Generally, one sample per each remedial excavation, or following the removal of each 2500 cubic yards of soil, whichever is less.

(e) Confirmation samples collected from "pot hole" excavations were selectively analyzed for fuel characterization.

**TABLE 2**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Excavated Hot Spot Sample**

		Sample Number, Collection Date, Grid Location and Depth		
		PL-GS-1-2.5'		
		6/3/97		
		A.8/A.9-41.5 @ 2.5' bgs*		
Analyte	EPA Method			
TRPH (mg/kg)	418.1	16,000.00		
TPHd (mg/kg)	8015M	38,000.00		
TPHg (mg/kg)	8015M	100.00		
Title 22 Metals (mg/kg)				
Antimony	6010	<5.00	Regulatory Levels TTLC (mg/kg)	STLC (mg/L)
Arsenic	6010	<1.00	500	15
Barium	6010	96.00	10,000	100
Beryllium	6010	<0.10	75	0.75
Cadmium	6010	1.40	100	1
Chromium (VI)	7196	<0.50	500	5
Chromium (total)	6010	250.00 (2)	2,500	5 **
Cobalt	6010	6.00	8,000	80
Copper	6010	28.00	2,500	25
Lead (total)	6010	290.00 (3) #	1,000	5
Mercury	7471	<0.01	20	0.2
Molybdenum	6010	<0.50	3,500	350
Nickel	6010	15.00	2,000	20
Selenium	6010	<1.00	100	1
Silver	6010	<0.10	500	5
Thallium	6010	<5.00	700	7
Vanadium	6010	28.00	2,400	24
Zinc	6010	94.00	5,000	250
VOCs (1) (µg/kg)				
Ethylbenzene	8260	270.00		
Total Xylenes	8260	140.00		
Isopropylbenzene	8260	100.00		
n-Propylbenzene	8260	190.00		
1,3,5-Trimethylbenzene	8260	210.00		
1,2,4-Trimethylbenzene	8260	350.00		
sec-Butylbenzene	8260	130.00		
Naphthalene	8260	1,300.00		
SVOCs (1) (µg/kg)				
Acenaphthene	8270	2,100.00		
Anthracene	8270	5,600.00		
Benzo (a) Anthracene	8270	15,000.00 #		
Benzo (b) Fluoranthene	8270	23,000.00 #		
Benzo (k) Fluoranthene	8270	7,200.00		
Benzo (a) Pyrene	8270	13,000.00 #		
Benzo (g,h,i) Perylene	8270	10,000.00		
Chrysene	8270	30,000.00		
Fluoranthene	8270	30,000.00		
Fluorene	8270	5,600.00		
Indeno (1,2,3-cd)Pyrene	8270	6,300.00		
2-Methylnaphthalene	8270	8,200.00		
Naphthalene	8270	1,400.00		
Phenanthrene	8270	36,000.00		
Pyrene	8270	72,000.00		
Carbon Chain Range (mg/kg)				
Up to and including C12	8015m	1,500.00		
C13-C22	8015m	31,000.00 #		
C23 and higher	8015m	7,900.00		
PCBs (µg/kg)	8080	ND		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

-- = not analyzed

sim.dist. = simulated distillation

ND = not detected

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated Biphenyls

bgs = below ground surface

# = Exceeds Screening Value

TRPH = Total Recoverable Petroleum Hydrocarbons

TPHd = Total Petroleum Hydrocarbons as diesel

TPHg = Total Petroleum Hydrocarbons as gasoline

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

(1) VOCs and SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 4.5 mg/L.

(3) Waste Extraction Test performed on this sample. Result was 1.8 mg/L.

\* Refer to Figure 8 for sample location

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 3**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Stockpile Samples\***  
Page 1 of 2

Analyte	EPA Method	Sample Number and Collection Date					Regulatory Levels	
		OA1-RE1-SP1 7/15/97	OA1-RE1-SP2 7/15/97	OA1-RE1-SP3 7/15/97	OA1-RE1-SP4 7/15/97	OA1-RE1-SP5 7/15/97		
TRPH (mg/kg)	418.1	2,100.00	1,000.00	<8.00	14.00	700.00		
<b>Title 22 Metals (mg/kg)</b>							<b>TTLc (mg/kg)</b>	<b>STLC (mg/L)</b>
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	9.60	500	5
Barium	6010	100.00	110.00	80.00	110.00	84.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	80.00 (2)(3)	87.00 (6)(7)	18.00	24.00	130.00 (10)(11)	2,500	5 **
Cobalt	6010	7.40	7.30	5.90	7.60	7.90	8,000	80
Copper	6010	12.00	14.00	9.90	9.80	25.00	2,500	25
Lead (total)	6010	190.00 (4)(5) #	220.00 (8)(9) #	<1.00	<1.00	48.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	11.00	12.00	6.90	10.00	16.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	33.00	34.00	25.00	32.00	63.00	2,400	24
Zinc	6010	44.00	60.00	26.00	35.00	200.00	5,000	250
<b>VOCs (1) (µg/kg)</b>								
Ethylbenzene	8260	<25.00	<25.00	<2.50	<2.50	<2.50		
Total Xylenes	8260	<25.00	<25.00	<2.50	<2.50	9.10		
n-Propylbenzene	8260	<25.00	<25.00	<2.50	<2.50	2.90		
1,3,5-Trimethylbenzene	8260	130.00	44.00	<2.50	<2.50	21.00		
1,2,4-Trimethylbenzene	8260	160.00	110.00	<2.50	<2.50	63.00		
n-Butylbenzene	8260	31.00	40.00	<2.50	<2.50	3.90		
Naphthalene	8260	100.00	1,000.00	<2.50	<2.50	230.00		
<b>SVOCs (1) (µg/kg)</b>								
Acenaphthene	8270	2,900.00	620.00	<100.00	<100.00	260.00		
Anthracene	8270	1,700.00	1,800.00	<100.00	<100.00	230.00		
Benzo (a) Anthracene	8270	72,000.00 #	5,100.00	<100.00	<100.00	370.00		
Benzo (b) Fluoranthene	8270	76,000.00 #	6,200.00	<250.00	<250.00	550.00		
Benzo (k) Fluoranthene	8270	33,000.00 #	2,200.00	<250.00	<250.00	<250.00		
Benzo (a) Pyrene	8270	40,000.00 #	3,700.00 #	<250.00	<250.00	330.00		
Benzo (g,h,i) Perylene	8270	28,000.00	3,000.00	<250.00	<250.00	<250.00		
4-Chlorophenyl phenyl ether	8270	<2,000.00	<200.00	<100.00	<100.00	<100.00		
Chrysene	8270	200,000.00 #	9,900.00	<100.00	<100.00	800.00		
Dibenz (a,h) Anthracene	8270	9,700.00 #	1,000.00	<100.00	<100.00	<100.00		
bis (2-Ethylhexyl)Phthalate	8270	<2,000.00	<200.00	<100.00	<100.00	320.00		
Fluoranthene	8270	180,000.00	9,900.00	<100.00	<100.00	1,200.00		
Fluorene	8270	11,000.00	1,700.00	<100.00	<100.00	<100.00		
Indeno (1,2,3-cd)Pyrene	8270	19,000.00 #	1,900.00	<250.00	<250.00	<250.00		
2-Methylnaphthalene	8270	85,000.00	8,600.00	<100.00	<100.00	300.00		
Naphthalene	8270	18,000.00	1,000.00	<100.00	<100.00	170.00		
Phenanthrene	8270	95,000.00	12,000.00	<100.00	<100.00	910.00		
Pyrene	8270	220,000.00	20,000.00	<100.00	<100.00	1,700.00		
<b>Carbon Chain Range (mg/kg)</b>								
Up to and including C12	8015m	--	--	--	--	--		
C13-C22	8015m	--	--	--	--	--		
C23 and higher	8015m	--	--	--	--	--		
<b>PCBs (µg/kg)</b>								
	8080	--	--	--	--	--		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

PCBs = Polychlorinated biphenyls

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 4 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

# = Exceeds Screening Value

ND = not detected

-- = not analyzed

(1) VOCs and SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 0.27 mg/L.

(3) TCLP analysis performed on this sample. Result was <0.1 mg/L.

(4) Waste Extraction Test performed on this sample. Result was <1.0 mg/L.

(5) TCLP analysis performed on this sample. Result was <1.0 mg/L.

(6) Waste Extraction Test performed on this sample. Result was 1.8 mg/L.

(7) TCLP analysis performed on this sample. Result was 0.13 mg/L.

(8) Waste Extraction Test performed on this sample. Result was 4.5 mg/L.

(9) TCLP analysis performed on this sample. Result was <1.0 mg/L.

(10) Waste Extraction Test performed on this sample. Result was 0.52 mg/L.

(11) TCLP analysis performed on this sample. Result was <0.1 mg/L.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 3**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Stockpile Samples\***  
**Page 2 of 2**

Analyte	EPA Method	Sample Number and Collection Date					Regulatory Levels	
		OA1-RE1-SP6 7/15/97	OA1-RE1-SP7 7/15/97	OA1-RE1-SP8 7/15/97	OA1-RE1-SP9 7/16/97	OA1-RE1-SP10 7/16/97		
TRPH (mg/kg)	418.1	85.00	3,100.00	140.00	700.00	13,000.00		
<b>Title 22 Metals (mg/kg)</b>							<b>TTLc (mg/kg)</b>	<b>STLC (mg/L)</b>
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	500	5
Barium	6010	96.00	110.00	120.00	110.00	95.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	25.00	110.00 (2)(3)	30.00	31.00	38.00	2,500	5 **
Cobalt	6010	7.00	7.00	7.90	8.30	6.60	8,000	80
Copper	6010	12.00	20.00	14.00	12.00	11.00	2,500	25
Lead (total)	6010	<1.00	14.00	<1.00	<1.00	21.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	9.80	13.00	15.00	13.00	11.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	29.00	36.00	36.00	36.00	28.00	2,400	24
Zinc	6010	34.00	65.00	44.00	45.00	41.00	5,000	250
<b>VOCs (1) (µg/kg)</b>								
Ethylbenzene	8260	13.00	1,700.00	<50.00	<25.00	<50.00		
Total Xylenes	8260	20.00	13,000.00	<50.00	<25.00	<50.00		
n-Propylbenzene	8260	12.00	920.00	<50.00	63.00	<50.00		
1,3,5-Trimethylbenzene	8260	58.00	9,600.00	<50.00	<25.00	110.00		
1,2,4-Trimethylbenzene	8260	240.00	23,000.00	160.00	110.00	<50.00		
n-Butylbenzene	8260	17.00	1,100.00	<50.00	110.00	<50.00		
Naphthalene	8260	860.00	64,000.00	2,500.00	4,300.00	860.00		
<b>SVOCs (1) (µg/kg)</b>								
Acenaphthene	8270	<100.00	3,500.00	350.00	890.00	4,300.00		
Anthracene	8270	200.00	7,500.00	640.00	1,900.00	11,000.00		
Benzo (a) Anthracene	8270	560.00	14,000.00 #	1,000.00	2,800.00	26,000.00 #		
Benzo (b) Fluoranthene	8270	780.00	12,000.00 #	360.00	2,100.00	28,000.00 #		
Benzo (k) Fluoranthene	8270	<250.00	<5,000.00	<250.00	790.00	12,000.00 #		
Benzo (a) Pyrene	8270	450.00	<5,000.00	830.00	2,800.00 #	22,000.00 #		
Benzo (g,h,i) Perylene	8270	440.00	10,000.00	530.00	2,000.00	14,000.00		
4-Chlorophenyl phenyl ether	8270	<100.00	<2,000.00	<100.00	<100.00	<2,000.00		
Chrysene	8270	1,000.00	31,000.00	1,400.00	3,700.00	48,000.00		
Dibenz (a,h) Anthracene	8270	<100.00	<2,000.00	<100.00	<100.00	<2,000.00		
bis (2-Ethylhexyl)Phthalate	8270	<100.00	<2,000.00	<100.00	<100.00	<2,000.00		
Fluoranthene	8270	1,300.00	18,000.00	590.00	2,500.00	53,000.00		
Fluorene	8270	200.00	10,000.00	840.00	1,600.00	13,000.00		
Indeno (1,2,3-cd)Pyrene	8270	260.00	<5,000.00	<250.00	980.00	6,800.00		
2-Methylnaphthalene	8270	1,600.00	160,000.00	1,200.00	31,000.00	160,000.00		
Naphthalene	8270	450.00	41,000.00	3,200.00	6,800.00	41,000.00		
Phenanthrene	8270	1,400.00	59,000.00	5,400.00	14,000.00	80,000.00		
Pyrene	8270	1,600.00	55,000.00	4,500.00	13,000.00	120,000.00		
<b>Carbon Chain Range (mg/kg)</b>								
Up to and including C12	8015m	--	--	--	--	480.00		
C13-C22	8015m	--	--	--	--	7,600.00		
C23 and higher	8015m	--	--	--	--	2,100.00		
<b>PCBs (µg/kg)</b>								
	8080	--	--	--	--	ND		

mg/kg = milligrams per kilogram # = Exceeds Screening Value

µg/kg = micrograms per kilogram VOCs = Volatile Organic Compounds

mg/L = milligrams per liter SVOCs = Semi-volatile Organic Compounds

-- = not analyzed

ND = not detected

TRPH = Total Recoverable Petroleum Hydrocarbons

PCBs = Polychlorinated biphenyls

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

(1) VOCs and SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 0.56 mg/L.

(3) TCLP analysis performed on this sample. Result was <0.1 mg/L.

\* Refer to Figure 4 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 4**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Excavated Hot Spot Sample**

		Sample Number, Collection Date, Grid Location and Depth		
		PL-GS-2-2.5'		
		6/3/97		
		A.8/A.9-40 @ 2.5' bgs*		
Analyte	EPA Method			
TRPH (mg/kg)	418.1	15,000.00		
TPHd (mg/kg)	8015M	37,000.00		
TPHg (mg/kg)	8015M	320.00		
Title 22 Metals (mg/kg)				
Antimony	6010	<5.00	500	15
Arsenic	6010	<1.00	500	5
Barium	6010	86.00	10,000	100
Beryllium	6010	<0.10	75	0.75
Cadmium	6010	<0.10	100	1
Chromium (VI)	7196	<0.50	500	5
Chromium (total)	6010	24.00	2,500	5 **
Cobalt	6010	6.10	8,000	80
Copper	6010	12.00	2,500	25
Lead (total)	6010	<1.00	1,000	5
Mercury	7471	<0.01	20	0.2
Molybdenum	6010	<0.50	3,500	350
Nickel	6010	8.50	2,000	20
Selenium	6010	<1.00	100	1
Silver	6010	<0.10	500	5
Thallium	6010	<5.00	700	7
Vanadium	6010	25.00	2,400	24
Zinc	6010	35.00	5,000	250
VOCs (1) (µg/kg)				
Ethylbenzene	8260	1,700.00		
Total Xylenes	8260	3,700.00		
n-Propylbenzene	8260	1,300.00		
1,3,5-Trimethylbenzene	8260	7,800.00		
tert-Butylbenzene	8260	2,700.00		
1,2,4-Trimethylbenzene	8260	24,000.00		
Naphthalene	8260	63,000.00		
SVOCs (1) (µg/kg)				
Acenaphthene	8270	6,700.00		
Anthracene	8270	13,000.00		
Benzo (a) Anthracene	8270	20,000.00 #		
Benzo (b) Fluoranthene	8270	30,000.00 #		
Benzo (k) Fluoranthene	8270	9,600.00		
Benzo (a) Pyrene	8270	23,000.00 #		
Benzo (g,h,i) Perylene	8270	13,000.00		
Chrysene	8270	40,000.00		
Fluoranthene	8270	29,000.00		
Fluorene	8270	18,000.00		
Indeno (1,2,3-cd)Pyrene	8270	8,400.00		
2-Methylnaphthalene	8270	220,000.00		
Naphthalene	8270	40,000.00		
Phenanthrene	8270	82,000.00		
Pyrene	8270	71,000.00		
Carbon Chain Range (mg/kg)				
Up to and including C12	8015m	2,100.00 #		
C13-C22	8015m	30,000.00 #		
C23 and higher	8015m	6,100.00		
PCBs (µg/kg)	8080	ND		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
sim.dist. = simulated distillation  
ND = not detected  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds

PCBs = Polychlorinated Biphenyls  
bgs = below ground surface  
# = Exceeds Screening Value  
TRPH = Total Recoverable Petroleum Hydrocarbons  
TPHd = Total Petroleum Hydrocarbons as diesel  
TPHg = Total Petroleum Hydrocarbons as gasoline  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration  
(1) VOCs and SVOCs not listed were not detected

\* Refer to Figure 8 for sample location

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 5**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Stockpile Samples\***  
Page 1 of 2

Analyte	EPA Method	Sample Number and Collection Date						Regulatory Levels	
		OA1-RE2-SP1A 7/16/97	OA1-RE2-SP1B 7/16/97	OA1-RE2-SP2 7/16/97	OA1-RE2-SP3 7/16/97	OA1-RE2-SP4 7/17/97	OA1-RE2-SP5 7/17/97		
TRPH (mg/kg)	418.1	8,300.00	83.00	120.00	240.00	14,000.00	16,000.00	TTLc (mg/kg)	STLC (mg/L)
<b>Title 22 Metals (mg/kg)</b>									
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	500	5
Barium	6010	81.00	110.00	95.00	77.00	110.00	81.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	1.80	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	43.00	29.00	27.00	21.00	27.00	140 (2)(3)	2,500	5 **
Cobalt	6010	5.90	8.10	7.20	6.10	6.70	5.40	8,000	80
Copper	6010	9.60	11.00	11.00	9.50	17.00	11.00	2,500	25
Lead (total)	6010	4.20	5.00	<1.0	<1.0	30.00	150 (4)(5) #	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	8.60	14.00	10.00	7.50	22.00	11.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	25.00	27.00	31.00	25.00	41.00	25.00	2,400	24
Zinc	6010	29.00	48.00	40.00	28.00	64.00	44.00	5,000	250
<b>VOCs (1) (µg/kg)</b>									
Ethylbenzene	8260	2,500.00	<2.50	<25.00	<5.00	<50.00	1,300.00		
Total Xylenes	8260	4,200.00	<2.50	<25.00	<5.00	170.00	8,600.00		
n-Propylbenzene	8260	1,600.00	<2.50	<25.00	<5.00	<50.00	920.00		
1,3,5-Trimethylbenzene	8260	580.00	<2.50	<25.00	26.00	210.00	7,600.00		
1,2,4-Trimethylbenzene	8260	36,000.00	<2.50	39.00	54.00	490.00	21,000.00		
n-Butylbenzene	8260	2,700.00	<2.50	<25.00	8.30	<50.00	1,700.00		
Naphthalene	8260	110,000.00	17.00	930.00	260.00	2,200.00	67,000.00		
<b>SVOCs (1) (µg/kg)</b>									
Acenaphthene	8270	6,200.00	<100.00	<100.00	<2,000.00	6,200.00	3,800.00		
Anthracene	8270	16,000.00	160.00	200.00	16,000.00	17,000.00	14,000.00		
Benzo (a) Anthracene	8270	43,000.00 #	790.00	370.00	62,000.00 #	79,000.00 #	55,000.00 #		
Benzo (b) Fluoranthene	8270	55,000.00 #	1,200.00	330.00	64,000.00 #	110,000.00 #	78,000.00 #		
Benzo (k) Fluoranthene	8270	19,000.00 #	<250.00	<250.00	25,000.00 #	33,000.00 #	18,000.00 #		
Benzo (a) Pyrene	8270	40,000.00 #	570.00	370.00	32,000.00 #	57,000.00 #	39,000.00 #		
Benzo (g,h,i) Perylene	8270	26,000.00	420.00	250.00	18,000.00	44,000.00	28,000.00		
Chrysene	8270	64,000.00	2,100.00	680.00	63,000.00	190,000.00 #	79,000.00		
Dibenz (a,h) Anthracene	8270	6,200.00 #	<100.00	<100.00	5,800.00 #	12,000.00 #	7,300.00 #		
Dibenzofuran	8270	<2,000.00	<100.00	<100.00	4,100.00	<2,000.00	<2,000.00		
Fluoranthene	8270	95,000.00	1,700.00	550.00	180,000.00	140,000.00	130,000.00		
Fluorene	8270	19,000.00	<100.00	190.00	12,000.00	17,000.00	12,000.00		
Indeno (1,2,3-cd)Pyrene	8270	15,000.00 #	300.00	<250.00	15,000.00 #	30,000.00 #	18,000.00 #		
2-Methylnaphthalene	8270	300,000.00	430.00	2,200.00	5,000.00	180,000.00	170,000.00		
Naphthalene	8270	87,000.00	<100.00	360.00	<2,000.00	42,000.00	45,000.00		
Phenanthrene	8270	130,000.00	970.00	1,500.00	120,000.00	110,000.00	88,000.00		
Pyrene	8270	200,000.00	2,200.00	1,800.00	170,000.00	260,000.00	190,000.00		
<b>Carbon Chain Range (mg/kg)</b>									
Up to and including C12	8015m	--	--	--	--	870.00	650.00		
C13-C22	8015m	--	--	--	--	15,000.00 #	10,000.00		
C23 and higher	8015m	--	--	--	--	5,500.00	2,600.00		
<b>PCBs (µg/kg)</b>									
	8080	--	--	--	--	--	ND		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

-- = not analyzed

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

PCBs = Polychlorinated biphenyls

ND = not detected

# = Exceeds Screening Value

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

(1) VOCs and SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 3.0 mg/L.

(3) TCLP analysis performed on this sample. Result was <0.1 mg/L.

(4) Waste Extraction Test performed on this sample. Result was 7.2 mg/L.

(5) TCLP analysis performed on this sample. Result was <1.0 mg/L.

\* Refer to Figures 5 and 6 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 5**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Stockpile Samples\***  
Page 2 of 2

Analyte	EPA Method	Sample Number and Collection Date					Regulatory Levels	
		OA1-RE2-SP6 7/17/97	OA1-RE2-SP7 7/17/97	OA1-RE2-SP8 7/17/97	OA1-RE2-SP9 7/18/97	OA1-RE2-SP10 7/18/97		
TRPH (mg/kg)	418.1	2,300.00	3,400.00	4,600.00	1,300.00	420.00		
<b>Title 22 Metals (mg/kg)</b>							<b>TTL</b>	<b>STL</b>
							(mg/kg)	(mg/L)
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	500	5
Barium	6010	90.00	110.00	91.00	100.00	100.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	1.30	<0.10	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	29.00	120.00 (2)(3)	49.00	37.00	25.00	2,500	5 **
Cobalt	6010	7.20	7.40	6.70	7.60	7.10	8,000	80
Copper	6010	13.00	11.00	12.00	16.00	11.00	2,500	25
Lead (total)	6010	9.70	320.00 (4)(5) #	27.00	34.00	<1.0	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	16.00	12.00	13.00	14.00	11.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	42.00	30.00	30.00	35.00	32.00	2,400	24
Zinc	6010	40.00	44.00	110.00	35.00	40.00	5,000	250
<b>VOCs (1) (µg/kg)</b>								
Ethylbenzene	8260	390.00	670.00	<50.00	<2.50	<2.50		
Total Xylenes	8260	1,500.00	1,100.00	150.00	<2.50	5.20		
n-Propylbenzene	8260	220.00	590.00	<50.00	<2.50	<2.50		
1,3,5-Trimethylbenzene	8260	2,000.00	2,900.00	330.00	<2.50	8.50		
1,2,4-Trimethylbenzene	8260	6,200.00	10,000.00	970.00	3.90	29.00		
n-Butylbenzene	8260	340.00	900.00	120.00	<2.50	<2.50		
Naphthalene	8260	17,000.00	41,000.00	5,500.00	23.00	110.00		
<b>SVOCs (1) (µg/kg)</b>								
Acenaphthene	8270	<60,000.00	2,700.00	1,100.00	<400.00	<200.00		
Anthracene	8270	270,000.00	7,100.00	3,000.00	3,000.00	940.00		
Benzo (a) Anthracene	8270	1,300,000.00 #	18,000.00 #	8,300.00	20,000.00 #	5,500.00		
Benzo (b) Fluoranthene	8270	1,900,000.00 #	22,000.00 #	14,000.00 #	39,000.00 #	8,800.00		
Benzo (k) Fluoranthene	8270	430,000.00 #	7,400.00	4,000.00	11,000.00	2,000.00		
Benzo (a) Pyrene	8270	760,000.00 #	16,000.00 #	7,900.00 #	17,000.00 #	3,600.00 #		
Benzo (g,h,i) Perylene	8270	470,000.00	12,000.00	6,000.00	18,000.00	4,000.00		
Chrysene	8270	1,500,000.00 #	2,300.00	15,000.00	46,000.00	13,000.00		
Dibenz (a,h) Anthracene	8270	160,000.00 #	<2,000.00	1,300.00	4,700.00 #	1,100.00		
Dibenzofuran	8270	<60,000.00	<2,000.00	<400.00	<400.00	<200.00		
Fluoranthene	8270	4,000,000.00	42,000.00	16,000.00	46,000.00	13,000.00		
Fluorene	8270	110,000.00	8,100.00	3,400.00	<400.00	230.00		
Indeno (1,2,3-cd)Pyrene	8270	470,000.00 #	5,800.00	3,900.00	15,000.00 #	3,400.00		
2-Methylnaphthalene	8270	<60,000.00	130,000.00	40,000.00	<400.00	3,000.00		
Naphthalene	8270	<60,000.00	36,000.00	9,800.00	<400.00	770.00		
Phenanthrene	8270	1,800,000.00	54,000.00	21,000.00	12,000.00	3,900.00		
Pyrene	8270	3,600,000.00 #	74,000.00	34,000.00	57,000.00	12,000.00		
<b>Carbon Chain Range (mg/kg)</b>								
Up to and including C12	8015m	--	--	--	--	--		
C13-C22	8015m	--	--	--	--	--		
C23 and higher	8015m	--	--	--	--	--		
<b>PCBs (µg/kg)</b>								
	8080	--	--	--	--	--		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

-- = not analyzed

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

PCBs = Polychlorinated biphenyls

ND = not detected

# = Exceeds Screening Value

TTL = California Total Threshold Limit Concentration

STL = California Soluble Threshold Limit Concentration

(1) VOCs and SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 2.3 mg/L.

(3) TCLP analysis performed on this sample. Result was <0.1 mg/L.

(4) Waste Extraction Test performed on this sample. Result was 6.0 mg/L.

(5) TCLP analysis performed on this sample. Result was <1.0 mg/L.

\* Refer to Figures 5 and 6 for sample locations

\*\* STL is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 6**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Excavated Confirmation Sample**

		Sample Number, Collection Date, Grid Location and Depth		
		RR-GS-37-4'		
		6/5/97		
		A.10-40 @ 4' bgs*		
Analyte	EPA Method			
TRPH (mg/kg)	418.1	<8.00		
TPHd (mg/kg)	8015M	<8.00		
TPHg (mg/kg)	8015M	<5.00		
		Regulatory Levels		
Title 22 Metals (mg/kg)		TTLc (mg/kg)	STLC (mg/L)	
Antimony	6010	<5.00	500	15
Arsenic	6010	<1.00	500	5
Barium	6010	99.00	10,000	100
Beryllium	6010	<0.10	75	0.75
Cadmium	6010	<0.10	100	1
Chromium (VI)	7196	<0.50	500	5
Chromium (total)	6010	25.00	2,500	5 **
Cobalt	6010	6.80	8,000	80
Copper	6010	9.50	2,500	25
Lead (total)	6010	<1.00	1,000	5
Mercury	7471	<0.01	20	0.2
Molybdenum	6010	<0.50	3,500	350
Nickel	6010	10.00	2,000	20
Selenium	6010	<1.00	100	1
Silver	6010	<0.10	500	5
Thallium	6010	<5.00	700	7
Vanadium	6010	28.00	2,400	24
Zinc	6010	32.00	5,000	250
VOCs (µg/kg)		8260	ND	
SVOCs (µg/kg)		8270	ND	
Carbon Chain Range (mg/kg)		8015m	ND	
PCBs (µg/kg)		8080	ND	

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

-- = not analyzed

sim.dist. = simulated distillation

ND = not detected

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

TPHd = Total Petroleum Hydrocarbons as diesel

TPHg = Total Petroleum Hydrocarbons as gasoline

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

bgs = below ground surface

PCBs = Polychlorinated Biphenyls

\* Refer to Figure 8 for sample location

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 7**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-3 Stockpile Samples\***  
**Page 1 of 2**

Analyte	EPA Method	Sample Number and Collection Date					Regulatory Levels	
		OA1-RE3-SP1 7/18/97	OA1-RE3-SP2 7/18/97	OA1-RE3-SP3 7/18/97	OA1-RE3-SP4 7/18/97	OA1-RE3-SP5 7/21/97		
TRPH (mg/kg)	418.1	48.00	1,500.00	1,700.00	170.00	47.00		
<b>Title 22 Metals (mg/kg)</b>							<b>TTL</b>	<b>STL</b>
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	500	5
Barium	6010	110.00	120.00	110.00	110.00	110.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	30.00	28.00	25.00	30.00	43.00	2,500	5 **
Cobalt	6010	7.20	7.80	7.30	7.70	7.70	8,000	80
Copper	6010	13.00	12.00	12.00	12.00	14.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	5.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	12.00	12.00	11.00	12.00	11.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	35.00	34.00	34.00	35.00	28.00	2,400	24
Zinc	6010	46.00	40.00	40.00	49.00	79.00	5,000	250
<b>VOCs (1) (µg/kg)</b>								
Ethylbenzene	8260	<2.50	300.00	130.00	<2.50	<2.50		
Tetrachloroethene	8260	<2.50	<200.00	<100.00	<2.50	<2.50		
Trichloroethene	8260	<2.50	<200.00	<100.00	<2.50	<2.50		
n-Propylbenzene	8260	<2.50	310.00	<100.00	<2.50	<2.50		
1,3,5-Trimethylbenzene	8260	<2.50	1,500.00	590.00	<2.50	<2.50		
1,2,4-Trimethylbenzene	8260	9.80	2,500.00	1,000.00	<2.50	<2.50		
sec-Butylbenzene	8260	<2.50	<200.00	<100.00	<2.50	<2.50		
p-Isopropyltoluene	8260	<2.50	<200.00	<100.00	<2.50	<2.50		
n-Butylbenzene	8260	<2.50	420.00	260.00	<2.50	<2.50		
Naphthalene	8260	110.00	20,000.00	14,000.00	<2.50	<2.50		
<b>SVOCs (1) (µg/kg)</b>								
Acenaphthene	8270	<100.00	1,400.00	1,200.00	<100.00	<100.00		
Anthracene	8270	<100.00	3,200.00	2,600.00	110.00	660.00		
Benzo (a) Anthracene	8270	360.00	6,300.00	4,000.00	470.00	2,200.00		
Benzo (b) Fluoranthene	8270	780.00	7,600.00	4,000.00	1,400.00	2,700.00		
Benzo (k) Fluoranthene	8270	<250.00	1,700.00	1,400.00	470.00	830.00		
Benzo (a) Pyrene	8270	360.00	5,100.00 #	3,900.00 #	640.00	1,300.00 #		
Benzo (g,h,i) Perylene	8270	450.00	3,700.00	3,000.00	790.00	780.00		
Chrysene	8270	740.00	9,500.00	6,800.00	1,300.00	3,200.00		
Dibenz (a,h) Anthracene	8270	<100.00	<400.00	<400.00	<100.00	220.00		
bis (2-Ethylhexyl)Phthalate	8270	<100.00	<400.00	<400.00	<100.00	110.00		
Fluoranthene	8270	560.00	11,000.00	5,100.00	1,300.00	8,400.00		
Fluorene	8270	<100.00	3,400.00	2,800.00	100.00	330.00		
Indeno (1,2,3-cd)Pyrene	8270	310.00	2,300.00	1,300.00	580.00	630.00		
2-Methylnaphthalene	8270	620.00	45,000.00	52,000.00	180.00	<100.00		
Naphthalene	8270	160.00	14,000.00	14,000.00	<100.00	<100.00		
Phenanthrene	8270	400.00	20,000.00	16,000.00	570.00	4,300.00		
Pyrene	8270	890.00	18,000.00	20,000.00	1,600.00	7,500.00		
<b>Carbon Chain Range (mg/kg)</b>								
	8015m	--	--	--	--	--		
<b>PCBs (µg/kg)</b>								
	8080	--	--	ND	--	--		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

-- = not analyzed

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

PCBs = Polychlorinated biphenyls

ND = not detected

# = Exceeds Screening Value

TTL = California Total Threshold Limit Concentration

STL = California Soluble Threshold Limit Concentration

(1) VOCs and SVOCs not listed were not detected

\* Refer to Figure 7 for sample locations

\*\* STL is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 7**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-3 Stockpile Samples\***  
Page 2 of 2

Analyte	EPA Method	Sample Number and Collection Date					Regulatory Levels	
		OA1-RE3-SP6 7/21/97	OA1-RE3-SP7 7/21/97	OA1-RE3-SP8 7/21/97	OA1-RE3-SP9 7/21/97	OA1-RE3-SP10 7/21/97		
TRPH (mg/kg)	418.1	36.00	32.00	63.00	43.00	79.00		
<b>Title 22 Metals (mg/kg)</b>							<b>TTLc</b> (mg/kg)	<b>STLC</b> (mg/L)
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	500	5
Barium	6010	110.00	120.00	110.00	120.00	110.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	72.00 (2)(3)	36.00	80.00 (4)(5)	71.00 (6)(7)	63.00 (8)(9)	2,500	5 **
Cobalt	6010	7.30	7.40	6.50	7.40	7.60	8,000	80
Copper	6010	18.00	15.00	28.00	25.00	17.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	2.50	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	12.00	12.00	10.00	11.00	9.90	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	32.00	32.00	30.00	30.00	30.00	2,400	24
Zinc	6010	70.00	53.00	85.00	80.00	62.00	5,000	250
<b>VOCs (1) (µg/kg)</b>								
Ethylbenzene	8260	<2.50	<2.50	<2.50	<2.50	<2.50		
Tetrachloroethene	8260	<2.50	3.00	9.40	<2.50	<2.50		
Trichloroethene	8260	4.10	<2.50	6.10	5.50	7.60		
n-Propylbenzene	8260	<2.50	<2.50	<2.50	<2.50	<2.50		
1,3,5-Trimethylbenzene	8260	<2.50	<2.50	4.30	<2.50	<2.50		
1,2,4-Trimethylbenzene	8260	<2.50	3.40	12.00	<2.50	<2.50		
sec-Butylbenzene	8260	<2.50	<2.50	2.90	<2.50	<2.50		
p-Isopropyltoluene	8260	<2.50	<2.50	3.10	<2.50	<2.50		
n-Butylbenzene	8260	<2.50	<2.50	<2.50	<2.50	<2.50		
Naphthalene	8260	<2.50	<2.50	15.00	<2.50	<2.50		
<b>SVOCs (1) (µg/kg)</b>								
Acenaphthene	8270	<100.00	<100.00	<100.00	<100.00	<100.00		
Anthracene	8270	<100.00	<100.00	<100.00	<100.00	<100.00		
Benzo (a) Anthracene	8270	<100.00	120.00	<100.00	<100.00	<100.00		
Benzo (b) Fluoranthene	8270	<250.00	<250.00	<250.00	<250.00	<250.00		
Benzo (k) Fluoranthene	8270	<250.00	<250.00	<250.00	<250.00	<250.00		
Benzo (a) Pyrene	8270	<250.00	<250.00	<250.00	<250.00	<250.00		
Benzo (g,h,i) Perylene	8270	<250.00	<250.00	<250.00	<250.00	<250.00		
Chrysene	8270	210.00	220.00	<100.00	310.00	270.00		
Dibenz (a,h) Anthracene	8270	<100.00	<100.00	<100.00	<100.00	<100.00		
bis (2-Ethylhexyl)Phthalate	8270	<100.00	<100.00	<100.00	110.00	300.00		
Fluoranthene	8270	130.00	330.00	<100.00	110.00	<100.00		
Fluorene	8270	<100.00	<100.00	<100.00	<100.00	<100.00		
Indeno (1,2,3-cd)Pyrene	8270	<250.00	<250.00	<250.00	<250.00	<250.00		
2-Methylnaphthalene	8270	<100.00	<100.00	<100.00	<100.00	<100.00		
Naphthalene	8270	<100.00	<100.00	<100.00	<100.00	<100.00		
Phenanthrene	8270	110.00	<100.00	<100.00	<100.00	230.00		
Pyrene	8270	170.00	360.00	<100.00	130.00	160.00		
<b>Carbon Chain Range (mg/kg)</b>								
	8015m	--	--	--	--	--		
<b>PCBs (µg/kg)</b>								
	8080	--	--	--	--	--		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

-- = not analyzed

ND = not detected

# = Exceeds Screening Value

PCBs = Polychlorinated biphenyls

(1) VOCs and SVOCs not listed were not detected

(2) Waste Extraction Test performed on this sample. Result was 0.54 mg/L.

(3) TCLP analysis performed on this sample. Result was <0.1 mg/L.

(4) Waste Extraction Test performed on this sample. Result was 0.78 mg/L.

(5) TCLP analysis performed on this sample. Result was <0.1 mg/L.

(6) Waste Extraction Test performed on this sample. Result was 0.83 mg/L.

(7) TCLP analysis performed on this sample. Result was <0.1 mg/L.

(8) Waste Extraction Test performed on this sample. Result was 2.6 mg/L.

(9) TCLP analysis performed on this sample. Result was <0.1 mg/L.

\* Refer to Figure 7 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**Remedial Excavation OA1-RE-3 Excavated Confirmation Sample**

		Sample Number, Collection Date, Grid Location and Depth		
		RR-GS-35-4'		
		6/5/97		
Analyte	EPA Method	A.9-35 @ 4' bgs*		
TRPH (mg/kg)	418.1	48.00		Regulatory Levels
			TTLc	STLC
Title 22 Metals (mg/kg)			(mg/kg)	(mg/L)
Antimony	6010	<5.00		500 15
Arsenic	6010	<1.00		500 5
Barium	6010	98.00		10,000 100
Beryllium	6010	<0.10		75 0.75
Cadmium	6010	<0.10		100 1
Chromium (VI)	7196	<0.50		500 5
Chromium (total)	6010	25.00		2,500 5 **
Cobalt	6010	5.10		8,000 80
Copper	6010	10.00		2,500 25
Lead (total)	6010	<1.00		1,000 5
Mercury	7471	<0.01		20 0.2
Molybdenum	6010	<0.50		3,500 350
Nickel	6010	8.00		2,000 20
Selenium	6010	<1.00		100 1
Silver	6010	<0.10		500 5
Thallium	6010	<5.00		700 7
Vanadium	6010	26.00		2,400 24
Zinc	6010	34.00		5,000 250
VOCs (µg/kg)	8260	--		
SVOCs (µg/kg)	8270	--		
Carbon Chain Range (mg/kg)	8015m	--		
PCBs (µg/kg)	8080	ND		

TRPH = Total Recoverable Petroleum Hydrocarbons

**TTLC = California Total Threshold Limit Concentration**

STLC = California Soluble Threshold Limit Concentration

bgs = below ground surface

PCBs = Polychlorinated Biphenyls

**SVOCs = Semi-volatile Organic Compounds**

### Organic Compounds

\* Refer to Figure 8 for sample location

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 9**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Confirmation Samples**  
**Page 1 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-14-12' 7/22/97 A.8/A.9-41.5 @ 12' bgs*	OA1-GS-20-4' 7/22/97 A.7/A.8-43.5 @ 4' bgs*	OA1-GS-21-12' 7/22/97 A.7/A.8-42.5 @ 12' bgs*		
		A.8/A.9-41.5 @ 12' bgs*	A.7/A.8-43.5 @ 4' bgs*	A.7/A.8-42.5 @ 12' bgs*	TTLc (mg/kg)	STLC (mg/L)
TRPH (mg/kg)	418.1	1,000.00	<8.00	<8.00		
<b>Title 22 Metals (mg/kg)</b>						
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	140.00	120.00	110.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	24.00	24.00	37.00	2,500	5 **
Cobalt	6010	9.30	7.50	8.70	8,000	80
Copper	6010	18.00	10.00	19.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	14.00	10.00	17.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	34.00	32.00	41.00	2,400	24
Zinc	6010	46.00	34.00	60.00	5,000	250
<b>VOCs (1) (µg/kg)</b>						
Ethylbenzene	8260	380.00	--	<2.50		
Trichloroethene	8260	<100.00	--	<2.50		
Total Xylenes	8260	<100.00	--	<2.50		
n-Propylbenzene	8260	220.00	--	<2.50		
1,3,5-Trimethylbenzene	8260	380.00	--	<2.50		
1,2,4-Trimethylbenzene	8260	2,700.00	--	<2.50		
n-Butylbenzene	8260	390.00	--	<2.50		
Naphthalene	8260	13,000.00	--	<2.50		
<b>SVOCs (1) (µg/kg)</b>						
Acenaphthene	8270	<400.00	--	<100.00		
Anthracene	8270	2,200.00	--	<100.00		
Benzo (a) Anthracene	8270	2,900.00	--	<100.00		
Benzo (b) Fluoranthene	8270	2,000.00	--	<250.00		
Benzo (g,h,i) Perylene	8270	1,800.00	--	<250.00		
Benzo (a) Pyrene	8270	2,600.00 #	--	<250.00		
Chrysene	8270	5,600.00	--	<100.00		
Fluoranthene	8270	3,600.00	--	<100.00		
Fluorene	8270	3,100.00	--	<100.00		
2-Methylnaphthalene	8270	46,000.00	--	<100.00		
Naphthalene	8270	8,500.00	--	<100.00		
Phenanthrene	8270	18,000.00	--	<100.00		
Pyrene	8270	15,000.00	--	<100.00		
<b>Carbon Chain Range (mg/kg)</b>						
	8015m	--	--	--		
<b>PCBs (µg/kg)</b>						
	8080	ND	--	--		

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

mg/L = milligrams per liter

-- = not analyzed

bgs = below ground surface

ND = none detected

PCBs = polychlorinated biphenyls

# = Exceeds Screening Value

VOCs = Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

TRPH = Total Recoverable Petroleum Hydrocarbons

(1) VOCs and SVOCs not listed were not detected

TTLc = California Total Threshold Limit Concentration

STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 9 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 9**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Confirmation Samples**  
**Page 2 of 5**

		Sample Number, Collection Date, Grid Location and Depth				
		OA1-GS-22-12' 7/23/97	OA1-GS-27-3' 7/23/97	OA1-GS-28-12' 7/23/97		
Analyte	EPA Method	A.7/A.8-41.5 @ 12' bgs*	A.6/A.7-43.5 @ 3' bgs*	A.6/A.7-42.5 @ 12' bgs*		
TRPH (mg/kg)	418.1	130.00	<8.00	<8.00	Regulatory Levels	
Title 22 Metals (mg/kg)					TTLC (mg/kg)	STLC (mg/L)
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	83.00	70.00	160.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	30.00	19.00	34.00	2,500	5 **
Cobalt	6010	8.40	6.20	8.20	8,000	80
Copper	6010	16.00	6.70	18.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	15.00	7.40	15.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	36.00	25.00	37.00	2,400	24
Zinc	6010	44.00	20.00	47.00	5,000	250
VOCs (1) (µg/kg)						
Ethylbenzene	8260	<2.50	--	--		
Trichloroethene	8260	6.30	--	--		
Total Xylenes	8260	<2.50	--	--		
n-Propylbenzene	8260	<2.50	--	--		
1,3,5-Trimethylbenzene	8260	<2.50	--	--		
1,2,4-Trimethylbenzene	8260	<2.50	--	--		
n-Butylbenzene	8260	5.30	--	--		
Naphthalene	8260	4.20	--	--		
SVOCs (1) (µg/kg)						
Acenaphthene	8270	160.00	--	--		
Anthracene	8270	210.00	--	--		
Benzo (a) Anthracene	8270	290.00	--	--		
Benzo (b) Fluoranthene	8270	<250.00	--	--		
Benzo (g,h,i) Perylene	8270	<250.00	--	--		
Benzo (a) Pyrene	8270	270.00	--	--		
Chrysene	8270	420.00	--	--		
Fluoranthene	8270	160.00	--	--		
Fluorene	8270	<100.00	--	--		
2-Methylnaphthalene	8270	<100.00	--	--		
Naphthalene	8270	<100.00	--	--		
Phenanthrene	8270	730.00	--	--		
Pyrene	8270	1,100.00	--	--		
Carbon Chain Range (mg/kg)						
	8015m	--	--	--		
PCBs (µg/kg)						
	8080	--	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected  
PCBs = polychlorinated biphenyls

VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 9 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 9**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Confirmation Samples**  
**Page 3 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-29-12' 7/23/97 A.6/A.7-41.5 @ 12' bgs*	OA1-GS-33-4' 7/23/97 A.5/A.6-43.5 @ 4' bgs*	OA1-GS-34-12' 7/23/97 A.5/A.6-42.5 @ 12' bgs*		
		A.6/A.7-41.5 @ 12' bgs*	A.5/A.6-43.5 @ 4' bgs*	A.5/A.6-42.5 @ 12' bgs*		
<b>TRPH (mg/kg)</b>	418.1	<8.00	<8.00	<8.00	<b>Regulatory Levels</b>	
<b>Title 22 Metals (mg/kg)</b>					<b>TTL</b>	<b>STLC</b>
					<b>(mg/kg)</b>	<b>(mg/L)</b>
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	81.00	110.00	290.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	26.00	30.00	24.00	2,500	5 **
Cobalt	6010	7.20	4.50	6.30	8,000	80
Copper	6010	15.00	9.40	14.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	13.00	13.00	11.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	31.00	31.00	29.00	2,400	24
Zinc	6010	43.00	33.00	45.00	5,000	250
<b>VOCs (1) (µg/kg)</b>						
Ethylbenzene	8260	--	--	--		
Trichloroethene	8260	--	--	--		
Total Xylenes	8260	--	--	--		
n-Propylbenzene	8260	--	--	--		
1,3,5-Trimethylbenzene	8260	--	--	--		
1,2,4-Trimethylbenzene	8260	--	--	--		
n-Butylbenzene	8260	--	--	--		
Naphthalene	8260	--	--	--		
<b>SVOCs (1) (µg/kg)</b>						
Acenaphthene	8270	--	--	--		
Anthracene	8270	--	--	--		
Benzo (a) Anthracene	8270	--	--	--		
Benzo (b) Fluoranthene	8270	--	--	--		
Benzo (g,h,i) Perylene	8270	--	--	--		
Benzo (a) Pyrene	8270	--	--	--		
Chrysene	8270	--	--	--		
Fluoranthene	8270	--	--	--		
Fluorene	8270	--	--	--		
2-Methylnaphthalene	8270	--	--	--		
Naphthalene	8270	--	--	--		
Phenanthrene	8270	--	--	--		
Pyrene	8270	--	--	--		
<b>Carbon Chain Range (mg/kg)</b>						
	8015m	--	--	--		
<b>PCBs (µg/kg)</b>						
	8080	--	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected  
PCBs = polychlorinated biphenyls

VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTL = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 9 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 9**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Confirmation Samples**  
**Page 4 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth		Regulatory Levels	
		OA1-GS-35-12' 7/23/97 A.5/A.6-41.5 @ 12' bgs*	OA1-GS-36-12' 7/23/97 A.5/A.6-40.5 @ 12' bgs*		
TRPH (mg/kg)	418.1	<8.00	<8.00		
<b>Title 22 Metals (mg/kg)</b>				<b>TTL</b>	<b>STLC</b>
				(mg/kg)	(mg/L)
Antimony	6010	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	500	5
Barium	6010	92.00	87.00	10,000	100
Beryllium	6010	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	500	5
Chromium (total)	6010	25.00	27.00	2,500	5 **
Cobalt	6010	7.80	7.10	8,000	80
Copper	6010	14.00	14.00	2,500	25
Lead (total)	6010	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	3,500	350
Nickel	6010	13.00	13.00	2,000	20
Selenium	6010	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	700	7
Vanadium	6010	30.00	32.00	2,400	24
Zinc	6010	42.00	42.00	5,000	250
<b>VOCs (1) (µg/kg)</b>					
Ethylbenzene	8260	--	--		
Trichloroethene	8260	--	--		
Total Xylenes	8260	--	--		
n-Propylbenzene	8260	--	--		
1,3,5-Trimethylbenzene	8260	--	--		
1,2,4-Trimethylbenzene	8260	--	--		
n-Butylbenzene	8260	--	--		
Naphthalene	8260	--	--		
<b>SVOCs (1) (µg/kg)</b>					
Acenaphthene	8270	--	--		
Anthracene	8270	--	--		
Benzo (a) Anthracene	8270	--	--		
Benzo (b) Fluoranthene	8270	--	--		
Benzo (g,h,i) Perylene	8270	--	--		
Benzo (a) Pyrene	8270	--	--		
Chrysene	8270	--	--		
Fluoranthene	8270	--	--		
Fluorene	8270	--	--		
2-Methylnaphthalene	8270	--	--		
Naphthalene	8270	--	--		
Phenanthrene	8270	--	--		
Pyrene	8270	--	--		
Carbon Chain Range (mg/kg)	8015m	--	--		
PCBs (µg/kg)	8080	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected  
PCBs = polychlorinated biphenyls

VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTL = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 9 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 9**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-1 Confirmation Samples**  
**Page 5 of 5**

Analyte		EPA Method		Sample Number, Collection Date, Grid Location and Depth				
				OA1-GS-63-3'				
				OA1-GS-64-7'				
		7/28/97		7/28/97				
		A.4/A.5-43.5 @ 3' bgs*		A.4/A.5-41.5 @ 7' bgs*				
TRPH (mg/kg)				418.1	<8.00	21.00	Regulatory Levels	
Title 22 Metals (mg/kg)							TTLC (mg/kg)	STLC (mg/L)
Antimony	6010	<5.00	<5.00	500	15			
Arsenic	6010	<1.00	<1.00	500	5			
Barium	6010	72.00	77.00	10,000	100			
Beryllium	6010	<0.10	<0.10	75	0.75			
Cadmium	6010	<0.10	<0.10	100	1			
Chromium (VI)	7196	<0.50	<0.50	500	5			
Chromium (total)	6010	18.00	27.00	2,500	5 **			
Cobalt	6010	6.70	7.00	8,000	80			
Copper	6010	9.50	9.80	2,500	25			
Lead (total)	6010	<1.00	<1.00	1,000	5			
Mercury	7471	<0.01	<0.01	20	0.2			
Molybdenum	6010	<0.50	<0.50	3,500	350			
Nickel	6010	6.40	11.00	2,000	20			
Selenium	6010	<1.00	<1.00	100	1			
Silver	6010	<0.10	<0.10	500	5			
Thallium	6010	<5.00	<5.00	700	7			
Vanadium	6010	24.00	32.00	2,400	24			
Zinc	6010	19.00	40.00	5,000	250			
VOCs (1) (µg/kg)								
Ethylbenzene	8260	--	<2.50					
Trichloroethene	8260	--	<2.50					
Total Xylenes	8260	--	<2.50					
n-Propylbenzene	8260	--	<2.50					
1,3,5-Trimethylbenzene	8260	--	<2.50					
1,2,4-Trimethylbenzene	8260	--	<2.50					
n-Butylbenzene	8260	--	<2.50					
Naphthalene	8260	--	<2.50					
SVOCs (1) (µg/kg)								
Acenaphthene	8270	--	<100.00					
Anthracene	8270	--	<100.00					
Benzo (a) Anthracene	8270	--	<100.00					
Benzo (b) Fluoranthene	8270	--	<250.00					
Benzo (g,h,i) Perylene	8270	--	<250.00					
Benzo (a) Pyrene	8270	--	<250.00					
Chrysene	8270	--	<100.00					
Fluoranthene	8270	--	<100.00					
Fluorene	8270	--	<100.00					
2-Methylnaphthalene	8270	--	<100.00					
Naphthalene	8270	--	<100.00					
Phenanthrene	8270	--	<100.00					
Pyrene	8270	--	<100.00					
Carbon Chain Range (mg/kg)								
	8015m	--	--					
PCBs (µg/kg)								
	8080	--	--					

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected  
PCBs = polychlorinated biphenyls

VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTL = California Total Threshold Limit Concentration  
STL = California Soluble Threshold Limit Concentration

\* Refer to Figure 9 for sample locations

\*\* STL is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 10**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Confirmation Samples**  
**Page 1 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-1-4' 7/22/97	OA1-GS-2-6' 7/22/97	OA1-GS-7-12' 7/22/97		
		A.10/A.11-43.5 @ 4' bgs*	A.10/A.11-42.5 @ 6' bgs*	A.9/A.10-42.5 @ 12' bgs*	TTLc (mg/kg)	STLC (mg/L)
TRPH (mg/kg)	418.1	<8.00	10.00	9.00		
<b>Title 22 Metals (mg/kg)</b>						
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	110.00	140.00	100.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	26.00	35.00	36.00	2,500	5 **
Cobalt	6010	6.90	8.60	9.40	8,000	80
Copper	6010	9.60	13.00	21.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	11.00	15.00	18.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	31.00	42.00	42.00	2,400	24
Zinc	6010	35.00	50.00	55.00	5,000	250
<b>VOCs (1) (µg/kg)</b>						
Ethylbenzene	8260	<2.50	<2.50	--		
Trichloroethene	8260	<2.50	<2.50	--		
Total Xylenes	8260	<2.50	<2.50	--		
n-Propylbenzene	8260	<2.50	<2.50	--		
1,3,5-Trimethylbenzene	8260	<2.50	<2.50	--		
1,2,4-Trimethylbenzene	8260	<2.50	<2.50	--		
n-Butylbenzene	8260	<2.50	<2.50	--		
Naphthalene	8260	<2.50	<2.50	--		
<b>SVOCs (1) (µg/kg)</b>						
Anthracene	8270	<100.00	<100.00	--		
Benzo (a) Anthracene	8270	<100.00	140.00	--		
Benzo (b) Fluoranthene	8270	<250.00	270.00	--		
Benzo (k) Fluoranthene	8270	<250.00	<250.00	--		
Benzo (g,h,i) Perylene	8270	<250.00	<250.00	--		
Benzo (a) Pyrene	8270	<250.00	<250.00	--		
Chrysene	8270	<100.00	300.00	--		
Dibenz (a,h) Anthracene	8270	<100.00	<100.00	--		
Fluoranthene	8270	<100.00	460.00	--		
Fluorene	8270	<100.00	<100.00	--		
Indeno(1,2,3-cd)Pyrene	8270	<250.00	<250.00	--		
2-Methylnaphthalene	8270	<100.00	<100.00	--		
Naphthalene	8270	<100.00	<100.00	--		
Phenanthrene	8270	<100.00	220.00	--		
Pyrene	8270	<100.00	510.00	--		
<b>Carbon Chain Range (mg/kg)</b>						
	8015m	--	--	--		
<b>PCBs (µg/kg)</b>						
	8080	--	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected

PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 10 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 10**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Confirmation Samples**  
**Page 2 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-8-12' 7/22/97	OA1-GS-9-10' 7/22/97	OA1-GS-10-4' 7/22/97		
		A.9/A.10-41.5 @ 12' bgs*	A.9/A.10-40.5 @ 10' bgs*	A.9/A.10-39.5 @ 4' bgs*	TTLc (mg/kg)	STLC (mg/L)
TRPH (mg/kg)	418.1	13.00	19.00	<8.00		
<b>Title 22 Metals (mg/kg)</b>						
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	160.00	120.00	99.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	34.00	24.00	23.00	2,500	5 **
Cobalt	6010	9.80	7.30	6.90	8,000	80
Copper	6010	20.00	12.00	9.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	18.00	12.00	9.40	2,000	20
Selenium	6010	<1.00	<1.0	<1.0	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	41.00	28.00	28.00	2,400	24
Zinc	6010	58.00	41.00	32.00	5,000	250
<b>VOCs (1) (µg/kg)</b>						
Ethylbenzene	8260	<2.50	<2.50	--		
Trichloroethene	8260	<2.50	<2.50	--		
Total Xylenes	8260	<2.50	<2.50	--		
n-Propylbenzene	8260	<2.50	<2.50	--		
1,3,5-Trimethylbenzene	8260	<2.50	<2.50	--		
1,2,4-Trimethylbenzene	8260	<2.50	<2.50	--		
n-Butylbenzene	8260	<2.50	<2.50	--		
Naphthalene	8260	<2.50	<2.50	--		
<b>SVOCs (1) (µg/kg)</b>						
Anthracene	8270	<100.00	<100.00	--		
Benzo (a) Anthracene	8270	<100.00	<100.00	--		
Benzo (b) Fluoranthene	8270	<250.00	<250.00	--		
Benzo (k) Fluoranthene	8270	<250.00	<250.00	--		
Benzo (g,h,i) Perylene	8270	<250.00	<250.00	--		
Benzo (a) Pyrene	8270	<250.00	<250.00	--		
Chrysene	8270	<100.00	<100.00	--		
Dibenz (a,h) Anthracene	8270	<100.00	<100.00	--		
Fluoranthene	8270	<100.00	<100.00	--		
Fluorene	8270	<100.00	<100.00	--		
Indeno(1,2,3-cd)Pyrene	8270	<250.00	<250.00	--		
2-Methylnaphthalene	8270	<100.00	<100.00	--		
Naphthalene	8270	<100.00	<100.00	--		
Phenanthrene	8270	<100.00	<100.00	--		
Pyrene	8270	<100.00	<100.00	--		
<b>Carbon Chain Range (mg/kg)</b>						
	8015m	--	--	--		
<b>PCBs (µg/kg)</b>						
	8080	--	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected

PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 10 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 10**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Confirmation Samples**  
**Page 3 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-11-4' 7/22/97	OA1-GS-15-12' 7/22/97	OA1-GS-16-12' 7/22/97		
		A.9/A.10-38.5 @ 4' bgs*	A.8/A.9-40.5 @ 12' bgs*	A.8/A.9-39.5 @ 12' bgs*	TTLc (mg/kg)	STLC (mg/L)
TRPH (mg/kg)	418.1	13.00	6,300.00	420.00		
<b>Title 22 Metals (mg/kg)</b>						
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	120.00	100.00	140.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	25.00	21.00	36.00	2,500	5 **
Cobalt	6010	6.50	8.20	10.00	8,000	80
Copper	6010	11.00	14.00	21.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	10.00	12.00	17.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	30.00	28.00	41.00	2,400	24
Zinc	6010	34.00	40.00	56.00	5,000	250
<b>VOCs (1) (µg/kg)</b>						
Ethylbenzene	8260	<2.50	700.00	<50.00		
Trichloroethene	8260	<2.50	<200.00	85.00		
Total Xylenes	8260	<2.50	540.00	<50.00		
n-Propylbenzene	8260	<2.50	590.00	56.00		
1,3,5-Trimethylbenzene	8260	<2.50	3,600.00	<50.00		
1,2,4-Trimethylbenzene	8260	<2.50	9,100.00	<50.00		
n-Butylbenzene	8260	<2.50	680.00	84.00		
Naphthalene	8260	<2.50	31,000.00	3,100.00		
<b>SVOCs (1) (µg/kg)</b>						
Anthracene	8270	<100.00	5,000.00	1,600.00		
Benzo (a) Anthracene	8270	<100.00	6,200.00	2,500.00		
Benzo (b) Fluoranthene	8270	<250.00	<5,000.00	1,400.00		
Benzo (k) Fluoranthene	8270	<250.00	<5,000.00	500.00		
Benzo (g,h,i) Perylene	8270	<250.00	<5,000.00	1,400.00		
Benzo (a) Pyrene	8270	<250.00	<5,000.00	2,300.00 #		
Chrysene	8270	<100.00	8,800.00	4,200.00		
Dibenz (a,h) Anthracene	8270	<100.00	<2,000.00	<200.00		
Fluoranthene	8270	<100.00	7,600.00	2,600.00		
Fluorene	8270	<100.00	6,400.00	1,400.00		
Indeno(1,2,3-cd)Pyrene	8270	<250.00	<5,000.00	<500.00		
2-Methylnaphthalene	8270	<100.00	130,000.00	19,000.00		
Naphthalene	8270	<100.00	36,000.00	4,800.00		
Phenanthrene	8270	<100.00	36,000.00	13,000.00		
Pyrene	8270	<100.00	26,000.00	12,000.00		
Carbon Chain Range (mg/kg)	8015m	--	--	--		
PCBs (µg/kg)	8080	--	ND	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected

PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 10 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 10**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Confirmation Samples**  
**Page 4 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-23-12' 7/23/97	OA1-GS-24-4' 7/23/97	OA1-GS-30-12' 7/23/97		
		A.7/A.8-40.5 @ 12' bgs*	A.7/A.8-39.5 @ 4' bgs*	A.6/A.7-40.5 @ 12' bgs*	TTLc (mg/kg)	STLC (mg/L)
TRPH (mg/kg)	418.1	<8.00	<8.00	<8.00		
<b>Title 22 Metals (mg/kg)</b>						
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	82.00	93.00	91.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	27.00	25.00	24.00	2,500	5 **
Cobalt	6010	7.10	5.80	7.10	8,000	80
Copper	6010	15.00	9.90	15.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	13.00	7.90	14.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	32.00	27.00	31.00	2,400	24
Zinc	6010	43.00	30.00	43.00	5,000	250
<b>VOCs (1) (µg/kg)</b>						
Ethylbenzene	8260	--	--	--		
Trichloroethene	8260	--	--	--		
Total Xylenes	8260	--	--	--		
n-Propylbenzene	8260	--	--	--		
1,3,5-Trimethylbenzene	8260	--	--	--		
1,2,4-Trimethylbenzene	8260	--	--	--		
n-Butylbenzene	8260	--	--	--		
Naphthalene	8260	--	--	--		
<b>SVOCs (1) (µg/kg)</b>						
Anthracene	8270	--	--	--		
Benzo (a) Anthracene	8270	--	--	--		
Benzo (b) Fluoranthene	8270	--	--	--		
Benzo (k) Fluoranthene	8270	--	--	--		
Benzo (g,h,i) Perylene	8270	--	--	--		
Benzo (a) Pyrene	8270	--	--	--		
Chrysene	8270	--	--	--		
Dibenz (a,h) Anthracene	8270	--	--	--		
Fluoranthene	8270	--	--	--		
Fluorene	8270	--	--	--		
Indeno(1,2,3-cd)Pyrene	8270	--	--	--		
2-Methylnaphthalene	8270	--	--	--		
Naphthalene	8270	--	--	--		
Phenanthrene	8270	--	--	--		
Pyrene	8270	--	--	--		
<b>Carbon Chain Range (mg/kg)</b>						
8015m		--	--	--		
<b>PCBs (µg/kg)</b>						
8080		--	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected

PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 10 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 10**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-2 Confirmation Samples**  
**Page 5 of 5**

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth			Regulatory Levels	
		OA1-GS-31-4' 7/23/97 A.6/A.7-39.5 @ 4' bgs*	OA1-GS-32-2' 7/23/97 A.6/A.7-38.5 @ 2' bgs*	OA1-GS-65-2' 7/28/97 A.4/A.5-39.5 @ 2' bgs*		
TRPH (mg/kg)	418.1	<8.00	91.00	<8.00	Regulatory Levels	
Title 22 Metals (mg/kg)					TTLc (mg/kg)	STLC (mg/L)
Antimony	6010	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	500	5
Barium	6010	6.50	98.00	54.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	16.00	28.00	16.00	2,500	5 **
Cobalt	6010	5.00	5.90	5.30	8,000	80
Copper	6010	7.40	11.00	7.10	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	6.00	10.00	5.50	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	700	7
Vanadium	6010	20.00	30.00	23.00	2,400	24
Zinc	6010	19.00	49.00	19.00	5,000	250
VOCs (1) (µg/kg)						
Ethylbenzene	8260	--	<2.50	--		
Trichloroethene	8260	--	<2.50	--		
Total Xylenes	8260	--	<2.50	--		
n-Propylbenzene	8260	--	<2.50	--		
1,3,5-Trimethylbenzene	8260	--	<2.50	--		
1,2,4-Trimethylbenzene	8260	--	<2.50	--		
n-Butylbenzene	8260	--	<2.50	--		
Naphthalene	8260	--	<2.50	--		
SVOCs (1) (µg/kg)						
Anthracene	8270	--	<100.00	--		
Benzo (a) Anthracene	8270	--	150.00	--		
Benzo (b) Fluoranthene	8270	--	250.00	--		
Benzo (k) Fluoranthene	8270	--	<250.00	--		
Benzo (g,h,i) Perylene	8270	--	<250.00	--		
Benzo (a) Pyrene	8270	--	<250.00	--		
Chrysene	8270	--	340.00	--		
Dibenz (a,h) Anthracene	8270	--	<100.00	--		
Fluoranthene	8270	--	420.00	--		
Fluorene	8270	--	<100.00	--		
Indeno(1,2,3-cd)Pyrene	8270	--	<250.00	--		
2-Methylnaphthalene	8270	--	<100.00	--		
Naphthalene	8270	--	<100.00	--		
Phenanthrene	8270	--	120.00	--		
Pyrene	8270	--	530.00	--		
Carbon Chain Range (mg/kg)	8015m	--	--	--		
PCBs (µg/kg)	8080	--	--	--		

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed  
bgs = below ground surface  
ND = none detected

PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTLc = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 10 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 11**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-3 Confirmation Samples**  
**Page 1 of 4**

Sample Number, Collection Date, Grid Location and Depth							
Analyte	EPA Method	OA1-GS-3-4'	OA1-GS-4-6'	OA1-GS-5-3'	OA1-GS-17-12'	OA1-GS-18-12'	Regulatory Levels
		7/22/97 A.10/A.11-41.5 @ 4' bgs*	7/22/97 A.10/A.11-40.5 @ 6' bgs*	7/22/97 A.10/A.11-39.5 @ 3' bgs*	7/22/97 A.8/A.9-38.5 @ 12' bgs*	7/22/97 A.8/A.9-37.5 @ 12' bgs*	
TRPH (mg/kg)	418.1	14.00	<8.00	9.00	25.00	<8.00	TTL (mg/kg) 500 500 10,000 75 100 500 2,500 8,000 2,500 1,000 20 3,500 2,000 100 500 700 2,400 5,000
Title 22 Metals (mg/kg)							
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	STLC (mg/L) 15 5 100 0.75 1 5 5 80 25 5 0.2 350 20 1 5 7 24 250
Arsenic	6010	<1.00	<5.00	<1.00	<1.00	<1.00	
Barium	6010	130.00	110.00	70.00	110.00	240.00	
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	
Chromium (total)	6010	30.00	27.00	17.00	32.00	34.00	
Cobalt	6010	9.80	7.00	6.00	9.00	9.50	
Copper	6010	11.00	11.00	8.00	18.00	20.00	
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	<1.00	
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	
Nickel	6010	13.00	13.00	6.90	16.00	17.00	
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	
Vanadium	6010	37.00	36.00	26.00	36.00	39.00	
Zinc	6010	41.00	42.00	22.00	52.00	55.00	
VOCs (1) (ug/kg)							
Trichloroethene	8260	<2.50	<2.50	<2.50	<2.50	--	
SVOCs (1) (ug/kg)							
bis(2-ethylhexyl)phthalate	8270	<100.00	<100.00	<100.00	<100.00	--	
Chrysene	8270	<100.00	<100.00	<100.00	<100.00	--	
Pyrene	8270	<100.00	<100.00	<100.00	<100.00	--	
Carbon Chain Range (mg/kg)							
	8015m	--	--	--	--	--	
PCBs (ug/kg)							
	8080	--	--	--	--	--	

TRPH = Total Recoverable Petroleum Hydrocarbons  
 (1) VOCs and SVOCs not listed were not detected  
 TTL = California Total Threshold Limit Concentration  
 STLC = California Soluble Threshold Limit Concentration

ND = none detected  
 PCBs = polychlorinated biphenyls  
 VOCs = Volatile Organic Compounds  
 SVOCs = Semi-volatile Organic Compounds  
 bgs = below ground surface

\* Refer to Figure 11 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 11**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-3 Confirmation Samples**  
**Page 2 of 4**

Sample Number, Collection Date, Grid Location and Depth							
OA1-GS-19-6' 7/22/97 A.9-37.5 @ 6' bgs*	OA1-GS-25-2' 7/23/97 A.7/A.8-38.5 @ 2' bgs*	OA1-GS-26-2' 7/23/97 A.7/A.8-37.5 @ 2' bgs*	OA1-GS-37-6' 7/23/97 A.9-36.5 @ 6' bgs*	OA1-GS-38-3' 7/23/97 A.9-35.5 @ 3' bgs*			
Analyte	EPA Method						
TRPH (mg/kg)	418.1	<8.00	<8.00	<8.00	<8.00	<8.00	Regulatory Levels TTLC (mg/kg) 500 STLC (mg/L) 15
Title 22 Metals (mg/kg)							
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500 15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	500 5
Barium	6010	99.00	66.00	58.00	82.00	86.00	10,000 100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75 0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	100 1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500 5
Chromium (total)	6010	18.00	14.00	15.00	21.00	23.00	2,500 5 **
Cobalt	6010	6.00	4.30	4.50	5.40	3.80	8,000 80
Copper	6010	8.40	7.60	6.20	7.80	6.10	2,500 25
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	<1.00	1,000 5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20 0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500 350
Nickel	6010	8.20	5.40	5.10	9.20	6.60	2,000 20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100 1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500 5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700 7
Vanadium	6010	27.00	18.00	22.00	26.00	25.00	2,400 24
Zinc	6010	28.00	17.00	19.00	29.00	27.00	5,000 250
VOCs (1) (ug/kg)							
Trichloroethene	8260	<2.50	--	--	--	<2.50	
SVOCs (1) (ug/kg)							
bis(2-ethylhexyl)phthalate	8270	<100.00	--	--	--	<100.00	
Chrysene	8270	<100.00	--	--	--	<100.00	
Pyrene	8270	<100.00	--	--	--	<100.00	
Carbon Chain Range (mg/kg)							
	8015m	--	--	--	--	--	
PCBs (ug/kg)							
	8080	--	--	--	--	--	

TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTL = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

ND = none detected  
PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
bgs = below ground surface

\* Refer to Figure 11 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg

**TABLE 11**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-3 Confirmation Samples**  
**Page 3 of 4**

Sample Number, Collection Date, Grid Location and Depth						
Analyte	EPA Method	OA1-GS-39-6'	OA1-GS-40-6'	OA1-GS-44-10'	OA1-GS-45-10'	OA1-GS-46-10'
		7/23/97 A.9-34.5 @ 6' bgs*	7/23/97 A.9-33.5 @ 6' bgs*	7/24/97 A.8/A.9-36.5 @ 10' bgs*	7/24/97 A.8/A.9-35.5 @ 10' bgs*	7/24/97 A.8/A.9-34.5 @ 10' bgs*
TRPH (mg/kg)	418.1	<8.00	25.00	<8.00	<8.00	<8.00
Title 22 Metals (mg/kg)						
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00
Barium	6010	81.00	84.00	120.00	110.00	110.00
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium (total)	6010	22.00	27.00	24.00	26.00	26.00
Cobalt	6010	5.20	5.00	6.70	6.70	7.40
Copper	6010	6.90	8.80	14.00	14.00	14.00
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	<1.00
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50
Nickel	6010	7.70	6.80	11.00	11.00	11.00
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00
Vanadium	6010	24.00	22.00	26.00	28.00	30.00
Zinc	6010	28.00	34.00	41.00	41.00	45.00
VOCs (1) (ug/kg)						
Trichloroethene	8260	--	11.00	<2.50	--	2.80
SVOCs (1) (ug/kg)						
bis(2-ethylhexyl)phthalate	8270	--	260.00	<100.00	--	<100.00
Chrysene	8270	--	120.00	<100.00	--	<100.00
Pyrene	8270	--	150.00	<100.00	--	<100.00
Carbon Chain Range (mg/kg)						
	8015m	--	--	--	--	--
PCBs (ua/kg)						
	8080	--	--	--	--	--

TRPH = Total Recoverable Petroleum Hydrocarbons  
 (1) VOCs and SVOCs not listed were not detected  
 TTLC = California Total Threshold Limit Concentration  
 STLC = California Soluble Threshold Limit Concentration

ND = none detected  
 PCBs = polychlorinated biphenyls  
 VOCs = Volatile Organic Compounds  
 SVOCs = Semi-volatile Organic Compounds  
 bgs = below ground surface

\* Refer to Figure 11 for sample locations

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented in Table 12 are Reported in mg/kg**

**TABLE 11**  
**Analytical Data Summary**  
**Remedial Excavation OA1-RE-3 Confirmation Samples**  
**Page 4 of 4**

Sample Number, Collection Date, Grid Location and Depth							
OA1-GS-47-10' 7/24/97 A.8/A.9-33.5 @ 10' bgs*	OA1-GS-51-2' 7/25/97 A.8-36.5 @ 2' bgs*	OA1-GS-52-3' 7/25/97 A.8-35.5 @ 3' bgs*	OA1-GS-53-3' 7/25/97 A.8-34.5 @ 3' bgs*	OA1-GS-54-2' 7/25/97 A.8-33.5 @ 2' bgs*			
Analyte	EPA Method						
TRPH (mg/kg)	418.1	<8.00	<8.00	<8.00	<8.00	<8.00	Regulatory Levels TTLc (mg/kg) STLC (mg/L)
Title 22 Metals (mg/kg)							
Antimony	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500 15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	<1.00	500 5
Barium	6010	92.00	100.00	120.00	130.00	110.00	10,000 100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	75 0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	<0.10	100 1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	<0.50	500 5
Chromium (total)	6010	25.00	25.00	24.00	31.00	25.00	2,500 5 **
Cobalt	6010	6.50	5.10	5.10	7.70	4.60	8,000 80
Copper	6010	14.00	11.00	9.20	17.00	12.00	2,500 25
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	<1.00	1,000 5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20 0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	<0.50	3,500 350
Nickel	6010	11.00	7.00	8.70	12.00	7.30	2,000 20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	<1.00	100 1
Silver	6010	<0.10	<0.10	<0.10	<0.10	<0.10	500 5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	700 7
Vanadium	6010	28.00	31.00	30.00	40.00	29.00	2,400 24
Zinc	6010	41.00	36.00	36.00	45.00	36.00	5,000 250
VOCs (1) (µg/kg)							
Trichloroethene	8260	--	--	--	--	--	
SVOCs (1) (µg/kg)							
bis(2-ethylhexyl)phthalate	8270	--	--	--	--	--	
Chrysene	8270	--	--	--	--	--	
Pyrene	8270	--	--	--	--	--	
Carbon Chain Range (mg/kg)							
	8015m	--	--	--	--	--	
PCBS (µg/kg)							
	8080	--	--	--	--	ND	

mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
mg/L = milligrams per liter  
-- = not analyzed

ND = none detected  
PCBs = polychlorinated biphenyls  
VOCs = Volatile Organic Compounds  
SVOCs = Semi-volatile Organic Compounds  
bgs = below ground surface

TRPH = Total Recoverable Petroleum Hydrocarbons  
(1) VOCs and SVOCs not listed were not detected  
TTL = California Total Threshold Limit Concentration  
STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 11 for sample locations  
\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

**NOTE: Site-Specific Health-Based Soil Screening Values Presented In Table 12 are Reported in mg/kg**

**TABLE 12**  
**Site-Specific Health-Based Soil Screening Values for**  
**Organic Constituents Soil Exposure Pathways (mg/kg)**  
**Page 1 of 5**

Constituent	Construction Worker Initial Value	Commercial/ Industrial User Initial Value	Final Value
1-butanol	1.98E+04	3.46E+04	1.98E+04
1,1-dichloroethane	2.23E+03	1.10E+03	1.10E+03
1,1-dichloroethene	1.57E+01	4.21E+00	4.21E+00
1,1,1,2-tetrachloroethane	4.98E+02	1.44E+04	4.98E+02
1,1,2-trichloroethane	2.23E+02	1.26E+03	2.23E+02
1,1,2,2-tetrachloroethane	6.25E+01	1.50E+03	6.25E+01
1,2-dibromo-3-chloropropane	2.42E+00	7.47E+01	2.42E+00
1,2-dibromoethane	4.86E+00	1.84E+02	4.86E+00
1,2-dichlorobenzene	NA	2.64E+06	2.64E+06
1,2-dichloroethane	2.06E+02	2.66E+02	2.06E+02
1,2-dichloropropane	3.37E+01	7.25E+00	7.25E+00
1,2-diphenylhydrazine	2.03E+01	2.36E+08	2.03E+01
1,2,3-trichloropropane	2.39E+00	4.08E+01	2.39E+00
1,2,4-trichlorobenzene	1.74E+02	4.74E+07	1.74E+02
1,3-dichloropropene	4.83E+01	6.63E+02	4.83E+01
1,4-dichlorobenzene	4.32E+02	4.37E+04	4.32E+02
2-butanone	3.28E+04	2.35E+06	3.28E+04
2-chlorophenol	8.57E+02	1.17E+06	8.57E+02
2-methylphenol	8.66E+03	7.59E+07	8.66E+03
2-naphthylamine	9.81E+00	1.63E+06	9.81E+00
2,4-dichlorophenol	5.21E+01	2.22E+07	5.21E+01
2,4-dimethylphenol	3.48E+03	4.37E+08	3.48E+03
2,4-dinitrophenol	3.49E+01	7.14E+09	3.49E+01
2,4-dinitrotoluene	3.48E+01	7.62E+06	3.48E+01
2,4,5-trichlorophenol	1.73E+04	2.21E+08	1.73E+04
2,4,6-trichlorophenol	2.52E+02	1.10E+07	2.52E+02
2,6-dinitrotoluene	2.59E+01	4.51E+05	2.59E+01
3,3-dichlorobenzidine	1.47E+01	7.53E+08	1.47E+01
4-chloroaniline	6.93E+01	6.50E+06	6.93E+01
4-methyl-2-pentanone	1.20E+04	6.84E+05	1.20E+04
4-methylphenol	8.69E+01	4.01E+07	8.69E+01
4,4-ddd	1.03E+02	9.97E+08	1.03E+02
4,4-dde	7.28E+01	2.83E+06	7.28E+01
4,4-ddt	1.22E+01	2.26E+08	1.22E+01
acenaphthene	8.10E+03	1.62E+08	8.10E+03
acetone	1.55E+04	4.37E+05	1.55E+04
acrolein	NA	8.05E+01	8.05E+01
acrylonitrile	1.59E+01	7.65E+01	1.59E+01

**TABLE 12**  
**Site-Specific Health-Based Soil Screening Values for**  
**Organic Constituents Soil Exposure Pathways (mg/kg)**  
**Page 2 of 5**

Constituent	Construction Worker Initial Value	Commercial/ Industrial User Initial Value	Final Value
aldrin	7.32E-01	2.82E+04	7.32E-01
alpha-bhc	3.93E+00	2.32E+05	3.93E+00
aniline	3.10E+03	1.02E+07	3.10E+03
anthracene	4.06E+03	1.37E+10	4.06E+03
aroclor 1016	NA	7.35E+05	7.35E+05
aroclor 1254	8.70E-01	5.69E+05	8.70E-01
benzene	1.43E+02	1.71E+02	1.43E+02
benzidine	3.52E-02	1.55E+02	3.52E-02
benzoic acid	6.96E+04	6.58E+10	6.96E+04
benzo(a)anthracene	1.14E+01	1.13E+09	1.14E+01
benzo(a)pyrene	1.14E+00	9.56E+07	1.14E+00
benzo(b)fluoranthene	1.14E+01	3.19E+08	1.14E+01
benzo(k)fluoranthene	1.14E+01	9.56E+07	1.14E+01
benzyl alcohol	1.73E+04	3.81E+08	1.73E+04
benzyl chloride	1.00E+02	4.03E+03	1.00E+02
beta-bhc	1.38E+01	9.94E+06	1.38E+01
beta-chloronaphthalene	NA	2.32E+07	2.32E+07
bis(2-chloro-1-methylethyl)ether	2.49E+02	2.93E+04	2.49E+02
bis(2-chloroethyl)ether	6.91E+00	6.91E+02	6.91E+00
bis(2-ethylhexyl)phthalate	2.10E+03	3.59E+09	2.10E+03
bromodichloromethane	1.30E+02	2.94E+03	1.30E+02
bromoform	3.34E+02	1.28E+05	3.34E+02
bromomethane	NA	1.15E+02	1.15E+02
carbazole	8.83E+02	6.66E+08	8.83E+02
carbon disulfide	1.43E+03	7.04E+04	1.43E+03
carbon tetrachloride	9.71E+01	1.35E+02	9.71E+01
chlordane	1.04E+00	1.55E+05	1.04E+00
chlorobenzene	NA	2.83E+04	2.83E+04
chloroform	1.49E+02	9.58E+02	1.49E+02
chloromethane	7.43E+02	7.40E+01	7.40E+01
chrysene	1.14E+02	5.06E+10	1.14E+02
cis-1,2-dichloroethene	1.34E+03	7.51E+03	1.34E+03
cumene	3.79E+03	5.73E+04	3.79E+03
dibenzo(a,h)anthracene	3.35E+00	6.34E+11	3.35E+00
dibromochloromethane	1.50E+02	1.54E+02	1.50E+02
dichlorodifluoromethane	2.14E+03	7.01E+02	7.01E+02
dieldrin	1.22E+00	2.33E+04	1.22E+00
diethyl phthalate	1.39E+05	6.03E+09	1.39E+05
di-n-butylphthalate	1.74E+04	4.19E+08	1.74E+04

**TABLE 12**  
**Site-Specific Health-Based Soil Screening Values for**  
**Organic Constituents Soil Exposure Pathways (mg/kg)**  
**Page 3 of 5**

Constituent	Construction Worker Initial Value	Commercial/ Industrial User Initial Value	Final Value
di-n-octylphthalate	3.49E+02	1.80E+10	3.49E+02
endosulfan	1.46E+02	2.14E+08	1.46E+02
endrin	7.33E+00	1.37E+08	7.33E+00
ethyl chloride	1.42E+05	1.57E+06	1.42E+05
ethylbenzene	NA	7.33E+05	7.33E+05
fluoranthene	6.97E+03	3.03E+10	6.97E+03
fluorene	6.94E+03	1.40E+08	6.94E+03
gamma-bhc	2.32E+01	2.63E+05	2.32E+01
heptachlor	2.87E+00	1.78E+03	2.87E+00
heptachlor epoxide	3.14E-01	1.35E+03	3.14E-01
hexachlorobenzene	9.69E+00	2.80E+03	9.69E+00
hexachlorobutadiene	2.24E+02	7.13E+04	2.24E+02
hexachlorocyclopentadiene	8.87E+01	9.79E+02	8.87E+01
hexachloroethane	1.73E+02	2.39E+05	1.73E+02
indeno(1,2,3-cd)pyrene	1.47E+01	1.23E+11	1.47E+01
isobutyl alcohol	4.81E+04	2.55E+06	4.81E+04
isophorone	1.85E+04	2.92E+07	1.85E+04
methoxychlor	8.71E+01	1.48E+09	8.71E+01
methyl methacrylate	1.06E+03	5.56E+04	1.06E+03
methylene bromide	1.51E+03	2.75E+04	1.51E+03
methylene chloride	1.07E+03	1.26E+03	1.07E+03
methyl-tert-butyl ether	NA	1.39E+06	1.39E+06
n-butylbenzyl phthalate	3.48E+03	6.52E+09	3.48E+03
nitroaniline, o-	8.07E+03	2.45E+06	8.07E+03
nitrobenzene	8.61E+01	1.78E+05	8.61E+01
nitrosodiphenylamine, p-	8.02E+02	1.03E+07	8.02E+02
n-nitrosodimethylamine	2.60E-01	1.38E-02	1.38E-02
n-nitroso-di-n-propylamine	2.48E+00	4.46E+02	2.48E+00
n-nitrosodiphenylamine	1.96E+03	4.80E+09	1.96E+03
o-chlorotoluene	3.14E+03	1.05E+05	3.14E+03
p-chloro-m-cresol	3.48E+04	NA	3.48E+04
pentachlorophenol	3.04E+02	3.09E+07	3.04E+02
phenol	1.04E+04	3.14E+09	1.04E+04
pyrene	2.35E+03	4.11E+10	2.35E+03
styrene	3.02E+05	7.58E+06	3.02E+05
tetrachloroethene	3.36E+02	7.52E+03	3.36E+02
toluene	3.12E+04	2.41E+05	3.12E+04
toxaphene	1.47E+01	9.16E+04	1.47E+01
trans-1,2-dichloroethene	2.68E+03	1.47E+04	2.68E+03

**TABLE 12**  
**Site-Specific Health-Based Soil Screening Values for**  
**Organic Constituents Soil Exposure Pathways (mg/kg)**  
**Page 4 of 5**

Constituent	Construction Worker Initial Value	Commercial/ Industrial User Initial Value	Final Value
trichloroethene	1.05E+03	1.39E+03	1.05E+03
trichlorofluoromethane	1.03E+04	4.89E+04	1.03E+04
vinyl acetate	5.41E+03	2.31E+05	5.41E+03
vinyl chloride	5.16E+00	1.81E-01	1.81E-01
xylenes	3.26E+04	2.61E+07	3.26E+04

**TABLE 12**  
**Site-Specific Health-Based Soil Screening Values for**  
**Inorganic Constituents Soil Exposure Pathways (mg/kg)**  
**Page 5 of 5**

Compound	Initial Value	ILM Background*	Final Value
aluminum	NT	3.63E+04	3.63E+04
antimony	9.05E+00	5.00E+00	9.05E+00
arsenic	8.87E+00	1.40E+01	1.40E+01
barium	2.52E+03	2.81E+02	2.52E+03
beryllium	1.56E+01	7.40E-01	1.56E+01
cadmium	1.64E+01	8.80E-01	1.64E+01
calcium	NT	3.80E+04	3.80E+04
chromium iii	3.22E+04	4.10E+01	3.22E+04
chromium vi	9.73E+01	NA	9.73E+01
cobalt	NT	2.00E+01	2.00E+01
copper	1.26E+03	5.30E+01	1.26E+03
cyanide	6.99E+02	NA	6.99E+02
iron	NT	6.05E+04	6.05E+04
lead	NT	1.11E+02	1.11E+02
mercury	6.78E+00	2.80E-01	6.78E+00
molybdenum	1.24E+03	2.30E+01	1.24E+03
nickel	2.39E+02	2.90E+01	2.39E+02
potassium	NT	8.26E+03	8.26E+03
selenium	1.82E+02	1.24E+03	1.24E+03
silver	1.30E+02	2.39E+02	2.39E+02
sodium	NT	1.96E+03	1.96E+03
thallium	NT	1.10E+01	1.10E+01
titanium	NT	1.95E+03	1.95E+03
vanadium	8.37E+01	8.20E+01	8.37E+01
zinc	8.73E+03	1.98E+02	8.73E+03

**NOTES:**

\*ILM background values provided in Baseline Risk Assessment (G&M 1996).

NT = No Toxicity values available for calculation of HBRG

NA = Not Available.

**TABLE 13**  
**Remedial Excavations OA1-RE-1, OA1-RE-2, and OA1-RE-3**  
**Stockpile Soil Disposition Reference**

Stockpile	Sample ID	Screening Criteria Summary*		Soil Location			
		Non-Haz Waste	Non-RCRA Haz Waste	North	East	South	West
OA1-RE1-A	OA1-RE1-SP1	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE1-B	OA1-RE1-SP2	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE1-C	OA1-RE1-SP3			38.A	D	40.5	J 9.5' - 5'
OA1-RE1-D	OA1-RE1-SP4			38.A	D	40.5	J 9.5' - 5'
OA1-RE1-E	OA1-RE1-SP5			38.A	D	40.5	J 9.5' - 5'
OA1-RE1-F	OA1-RE1-SP6			38.A	D	40.5	J 9.5' - 7'
OA1-RE1-G	OA1-RE1-SP7			12	A.10	13.5	A.8/A.9 8' - 4'
OA1-RE1-H	OA1-RE1-SP8	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE1-I	OA1-RE1-SP9	X		38.A	D	40	H 5' - 4'
OA1-RE1-J	OA1-RE1-SP10	X		Disposed Off-Site as Non-Hazardous Waste			
	PL-GS-1-2.5'	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-A1/A2	OA1-RE2-SP1A	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-B	OA1-RE2-SP2			38.A	D/E	40	H 7' - 6'
OA1-RE2-C	OA1-RE2-SP3	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-D	OA1-RE2-SP4	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-E	OA1-RE2-SP5	X	X	Disposed Off-Site as Non-RCRA Hazardous Waste			
	PL-GS-2-2.5'	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-F	OA1-RE2-SP6	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-G	OA1-RE2-SP7	X		Disposed Off-Site as Non-RCRA Hazardous Waste			
OA1-RE2-H	OA1-RE2-SP8	X		Disposed Off-Site as Non-Hazardous Waste			
	RR-GS-37-4'			Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-I	OA1-RE2-SP9	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE2-J	OA1-RE2-SP10	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE3-A	OA1-RE3-SP1			18	A.9	19.5	A.8 8' - 7'
OA1-RE3-B	OA1-RE3-SP2	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE3-C	OA1-RE3-SP3	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE3-D	OA1-RE3-SP4			1	A.5	9.5	A.1/A.2 5' - 4'
OA1-RE3-E	OA1-RE3-SP5	X		Disposed Off-Site as Non-Hazardous Waste			
OA1-RE3-F	OA1-RE3-SP6			1	A.5	9.5	A.1/A.2 5' - 4'
OA1-RE3-G	OA1-RE3-SP7			20	A.10/A.11	44	A.5 4' - 2'
OA1-RE3-H	OA1-RE3-SP8			1	A.5	9.5	A.1/A.2 3' - 2'
OA1-RE3-I	OA1-RE3-SP9			1	A.5	9.5	A.1/A.2 3' - 2'
	RR-GS-35-4'			Disposed Off-Site as Non-Hazardous Waste			
OA1-RE3-J	OA1-RE3-SP10			1	A.5	9.5	A.1/A.2 3' - 2'

\* Blank space denotes soil samples which pass all screening criteria.

X Denotes stockpile disposition based on soil sample failing a screening criterion.  
bgs = below ground surface

\*\* Refer to Figure 14 for backfill locations